

**REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED**

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**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

INTEL CORPORATION, APPLE INC.,

Plaintiffs,

v.

FORTRESS INVESTMENT GROUP LLC,  
FORTRESS CREDIT CO. LLC, UNILOC  
2017 LLC, UNILOC USA, INC., UNILOC  
LUXEMBOURG S.A.R.L., VLSI  
TECHNOLOGY LLC, INVT SPE LLC,  
INVENTERGY GLOBAL, INC., IXI IP,  
LLC, and SEVEN NETWORKS, LLC,

Defendants.

Case No. 3:19-cv-07651-EMC

**AMENDED COMPLAINT**

**JURY TRIAL DEMANDED**

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1 Plaintiffs Intel Corporation (“Intel”) and Apple Inc. (“Apple”), on personal knowledge as  
2 to their own acts, and on information and belief as to all other acts based on their own and their  
3 attorneys’ investigation, by and through their attorneys, allege as follows:

**INTRODUCTION**

5 1. Intel and Apple bring this action under Section 1 of the Sherman Act and Sections  
6 4, 7, and 16 of the Clayton Act, 15 U.S.C. §§ 1, 15, 18, and 26; under Cal. Bus. & Prof. Code  
7 § 17200 et seq.; and to prevent and restrain Defendants’ anticompetitive conduct and other  
8 violations of the law.

9 2. Rather than promote the progress of science and useful arts, patent assertion entities  
10 (“PAEs”), including Defendants, that aggressively pursue meritless litigation have long been  
11 recognized to harm and deter innovation. For example, one study estimated that patent litigation  
12 brought by PAEs in the United States resulted in expenditures of \$29 billion in 2011 for licensing  
13 fees, legal fees, and other costs of responding to PAE litigation.<sup>1</sup> Another study found, by looking  
14 at the impact on stock price, that lawsuits by PAEs from 1990 through 2010 were responsible for  
15 the defendants losing half a trillion dollars.<sup>2</sup> And those losses are not offset by corresponding  
16 gains to patent holders that promote innovation. One study found that the profits received by PAEs  
17 from litigation amounted to less than 10% of the lost share value of companies targeted by the  
18 PAEs.<sup>3</sup>

19 3. Based on such studies, the President’s Council of Economic Advisers, the National  
20 Economic Council, and the Office of Science & Technology Policy warned in a 2013 report that  
21 “Patent Assertion Entities . . . focus on aggressive litigation, using such tactics as: . . . creating  
22 shell companies that make it difficult for defendants to know who is suing them; and asserting that  
23 their patents cover inventions not imagined at the time they were granted.”<sup>4</sup> Further, the report  
24

25 <sup>1</sup> James Bessen; Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 Cornell L. Rev. 387,  
389-90 (2014).

26 <sup>2</sup> James Bessen; Jennifer Ford; Michael J. Meurer, *The Private and Social Costs of Patent Trolls*,  
34 Regulation 26, 31 (2011).

27 <sup>3</sup> Bessen & Meurer, *supra* note 1, at 411.

28 <sup>4</sup> Executive Office of the President, *Patent Assertion and U.S. Innovation* at 1 (June 2013).

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1 concluded that PAEs “have had a negative impact on innovation and economic growth.”<sup>5</sup>

2 4. Recognition of the threat posed by improper patent assertions has led to judicial  
3 determinations clarifying the law and legislative changes with the potential to curb meritless  
4 litigation. In 2011, the U.S. Court of Appeal for the Federal Circuit struck down the overreaching  
5 presumption offered by Defendant Uniloc USA, Inc. (“Uniloc USA”) that, as a rule of thumb,  
6 infringement of a single patent warranted twenty-five percent of the product’s profit. The same  
7 year, Congress enacted the Leahy Smith America Invents Act, including *inter partes* review  
8 procedures through which the Patent Trial and Appeal Board (“PTAB”) of the U.S. Patent &  
9 Trademark Office (“USPTO”) can be asked to review whether issued patents are actually valid.  
10 And in 2014, the Supreme Court held in *Alice Corp. v. CLS Bank International*, 573 U.S. 208  
11 (2014), that inventions directed to abstract ideas could not be patented unless they contain an  
12 “inventive concept” beyond implementation of the abstract idea in computer code.

13 5. In 2016, the Council of Economic Advisers returned to the subject of PAEs,  
14 observing that research since 2013 continues to show “that a substantial amount of patent litigation  
15 in the United States, often with little substantive merit, often arises from certain types of NPEs  
16 [non-practicing entities] called ‘patent assertion entities.’”<sup>6</sup> But the Council noted that legislative  
17 and judicial actions, such as those described above, are “promising in that all of them should reduce  
18 the level of frivolous patent litigation.”<sup>7</sup>

19 6. In the face of these challenges, PAEs have evolved. PAEs have increasingly been  
20 partnering with investment firms to fuel their litigation. This trend is part of a larger trend in the  
21 growth of third-party investment in litigation generally. Although the precise scale of investment  
22 in litigation is unknown, estimates put it in the tens of billions of dollars.<sup>8</sup> As one example, the  
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24 <sup>5</sup> *Id.* at 2.

25 <sup>6</sup> Council of Economic Advisers Issue Brief, *The Patent Litigation Landscape: Recent Research and Developments* at 2 (March 2016).

26 <sup>7</sup> *Id.* at 7.

27 <sup>8</sup> Brian Baker, *In low-yield environment, litigation finance booms*, MarketWatch (Aug, 21, 2018)  
28 (reporting an estimate of \$50 to \$100 billion invested in litigation finance); L.M. Sixel, *Private equity’s latest investment? Lawsuits*, Houston Chronicle (May 18, 2018) (reporting an estimate of \$30 billion invested in lawsuits).

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largest litigation investor reported having investments of \$2.8 billion in 2019.<sup>9</sup>

7. Having deep-pocketed investment firms standing behind them has made PAEs only more aggressive. Indeed, to meet the expectations of their new investors for high returns, PAEs must act ever more aggressively. These new investors are content to incur loss after loss so long as they have the chance to hit a windfall reward that will justify their investment. Patent assertion thus becomes simply a numbers game disassociated from the merits of the underlying patents, with PAEs and their investors betting that serial assertions with aggressive demands will strike a jackpot eventually making up for many other losses. Consistent with this strategy, while the overall level of patent litigation may be declining, assertions by non-practicing entities are increasing.<sup>10</sup>

8. A central player in this emerging investment strategy is Fortress Investment Group LLC (“Fortress”). Fortress is an investment firm that went public in 2007. Fortress’s shares traded at over \$35 per share after going public, but one decade later, Fortress was struggling with poor returns and its share price had plummeted to around \$5 per share in 2017. Fortress was acquired that year by SoftBank Group Corp. (“SoftBank”) for \$3.3 billion. Fortress contends it is “a leading, highly diversified global investment manager” and claims to have approximately \$41.7 billion of assets under management as of March 31, 2020.<sup>11</sup> One way in which Fortress has tried to turn around its performance and justify SoftBank’s investment in it is through increased speculation on patent assertions.

9. Intel and Apple bring this complaint to end a campaign of anticompetitive patent aggregation by Fortress and a web of PAEs that Fortress owns or controls. Fortress has used its stable of PAEs to aggregate a massive but obscured portfolio of patents that purportedly read on high-tech consumer and enterprise electronic devices and components or software therein and

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<sup>9</sup> Burford Capital, *Investor Presentation – 1H 2019 Results* at 5 (July 25, 2019).

<sup>10</sup> Unified Patents, *Q3 2019 Patent Dispute Report* (Sept. 30, 2019) (“District court patent litigation is down 5.5% compared to the same period for 2018 (down 43% compared to the peak in 2015). However, NPEs in Q1-Q3 2019 filed 1,424 new district court cases, slightly more than the number of new NPE cases in 2018.”); Unified Patents, *Q2 2019 Patent Dispute Report* (July 1, 2019) (“District court patent litigation is down 5.5% compared to the same period for 2018 (“NPEs filed over 550 new district court cases in Q2 2019, the most NPE cases in a single quarter since 2016”).

<sup>11</sup> Fortress, <https://www.fortress.com/about> (last visited Aug. 4, 2020).

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1 processes used to manufacture them. As detailed below, that portfolio includes enormous numbers  
2 of patents that are substitutes and complements for one another in antitrust markets consisting of  
3 patents that perform specific functions in electronic products. Before Defendants' patent  
4 aggregation scheme, competition among diffuse owners of those patents constrained the royalties  
5 that those predecessor owners could demand and obtain from product suppliers. By eliminating  
6 competition, Defendants' aggregation scheme has resulted in product suppliers having very few if  
7 any alternatives to Defendants to license patents in many of those antitrust markets, resulting in  
8 inflated royalties and reduced output in those markets and for licenses to Defendants' overall  
9 portfolio.

10 10. Further enhancing the anticompetitive scheme, by employing a network of PAEs  
11 that it either owns or controls, Fortress has created a web of entities that obscures Fortress's  
12 puppeteering role in this scheme. Rather than enhancing efficiency, Fortress uses aggregation to  
13 undermine it by eliminating competition and creating a structure in which Fortress and its PAEs  
14 benefit by making endless patent assertions. Those patent assertions often include assertions of  
15 weak patents—*i.e.*, those that never would have been asserted by their former owners, which faced  
16 competitive constraints—in order to stretch the resources of their targets and increase the  
17 possibility that those weak patents will improperly be found valid and infringed or the prospect  
18 that a target (like Intel or Apple) will agree to a license to resolve the threat posed by Fortress and  
19 its PAEs. Thus, rather than promoting the procompetitive benefits of the patent system by  
20 increasing innovation and output, Fortress's scheme has the opposite effect. Fortress and its PAEs  
21 acquire and seek to monetize meritless patents that never would have been asserted by their  
22 original owners, given the competitive constraints those owners faced that Defendants' patent  
23 aggregation scheme has eliminated—imposing a tax on the electronics industry that increases  
24 prices, decreases output, and ultimately harms consumers. To the extent that Fortress and the other  
25 Defendants have patents that would actually be of value to potential licensees, the transfer of those  
26 patents to Fortress's control limits access to them because those patents are now held by entities  
27 that, in light of the competition that has been eliminated, have no incentive to license patents in a  
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1 way that captures royalties that are commensurate with their actual value. Instead, those entities  
2 have incentives to obtain excessive monopoly rents by exploiting patent portfolios that aggregate  
3 any valuable patents with many meritless patents.

4 11. Through its anticompetitive aggregation scheme involving substitute patents whose  
5 owners formerly competed with one another to license product suppliers, Fortress has engaged in  
6 anticompetitive conduct by creating a portfolio of patents that purportedly read on electronic  
7 devices and components or software therein and processes used to manufacture them that allows  
8 it to charge far more than the competitive prices for licenses and the value of the inventive  
9 contributions (if any) of the patents. Fortress and its PAEs seek to use that ill-gotten power to  
10 extract and extort exorbitant revenues unfairly and anticompetitively from Intel, Apple, and other  
11 suppliers of electronic devices or components or software for such devices, and ultimately from  
12 consumers of those products. Fortress's aggregation is thus intended for an anticompetitive  
13 purpose—to invest in patents at costs lower than the holdup value of the patents to ensnare as many  
14 potential licensees as possible, eliminate competition that existed before the aggregation, and allow  
15 Fortress and the other Defendants to assert as many possible claims of infringement to tax the  
16 commercial use of existing technology at rates beyond the actual value (if any) of the aggregated  
17 patents.

18 12. In furtherance of the anticompetitive scheme, Fortress and the other Defendants  
19 have deployed patents in waves of lawsuits against their targets without regard for the merits of  
20 the claims. Rather than licensing and litigating based on the merits of the patents which the prior  
21 owners were required to do given the competitive constraints they faced, Fortress and its PAEs  
22 operate based on volume and repetition, targeting the resolve of the targets instead of establishing  
23 the merits and value of the patents. Given the size of the portfolio and the aggregation of substitute  
24 patents, Fortress and its PAEs can deploy patent after patent in case after case against their targets  
25 with the threat of ever more patent assertions and ever more litigation. Faced with this threat,  
26 many victims have agreed to settle, rather than to challenge Fortress and its PAEs, for amounts  
27 that reflect not the merits of the underlying patents but the effectiveness of the Fortress model in  
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eliminating competition through aggregation. Other targets, such as Apple and Intel, are forced to expend enormous resources on litigation and face ongoing and future serial patent assertions by Defendants as a result of the competition that has been eliminated through Defendants' patent aggregation scheme. Thus, Fortress and the other Defendants foreclose the possibility—which existed before aggregation—that licensing from alternative licensors or litigation can be an economic alternative to licensing patents from Defendants.

13. Intel and Apple bring this action to remedy the harms that they have already suffered from Defendants' violations of federal antitrust and state unfair competition laws and to prevent further harm to themselves, the broader electronics industry, and U.S. consumers.

**PARTIES**

14. Plaintiff Intel develops, manufactures, and sells integrated digital technology products. Intel is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business within this District at 2200 Mission College Boulevard, Santa Clara, California.

15. Plaintiff Apple designs and sells innovative, iconic consumer electronics such as the iPhone, iPad, and MacBook. Apple is a corporation organized and existing under the laws of the State of California with its principal place of business within this District at One Apple Park Way, Cupertino, California.

16. Defendant Fortress claims to be a Delaware limited liability company. Fortress does business and maintains an office within this District at One Market Plaza, Spear Tower, 42<sup>nd</sup> Floor, San Francisco, California.

17. Defendant Fortress Credit Co. LLC ("Fortress Credit") claims to be a Delaware limited liability company with its principal place of business at 1345 Avenue of Americas, 46th Floor, New York, New York. Fortress Credit is registered with the California Secretary of State to do business in California and also maintains an office within this District at One Market Plaza, Spear Tower, 42<sup>nd</sup> Floor, San Francisco, California. Fortress Credit is an affiliate of Fortress.

18. Defendant Uniloc 2017 LLC ("Uniloc 2017") claims to be a Delaware limited



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1 liability company with addresses at 1209 Orange Street, Wilmington, Delaware; 620 Newport  
2 Center Drive, Newport Beach, California; and 102 N. College Avenue, Suite 303, Tyler, Texas.

3 19. Defendant Uniloc USA claims to be a Texas corporation with a principal place of  
4 business at Legacy Town Center I, Suite 380, 7160 Dallas Parkway, Plano, Texas. Uniloc USA is  
5 registered with the California Secretary of State to do business in California and also maintains an  
6 office in Newport Beach, California, where it conducts strategy meetings.

7 20. Defendant Uniloc Luxembourg, S.à.r.l. (“Uniloc Luxembourg”) claims to be a  
8 Luxembourg company having a principal place of business at 15, Rue Edward Steichen, 4<sup>th</sup> Floor,  
9 L-2540, Luxembourg. Uniloc Luxembourg’s CEO Craig Etchegoyen maintains a residence in  
10 Newport Beach, California, where he spends about 20 percent of his time and which he uses to  
11 conduct Uniloc Luxembourg business. Uniloc Luxembourg’s chief financial officer, Drake  
12 Turner, resides and works in Southern California. Mr. Turner’s responsibilities include preparing  
13 Uniloc Luxembourg’s financial documents and negotiating terms with companies, including  
14 Fortress, that have security interests in Uniloc Luxembourg’s patents. Uniloc Luxembourg  
15 conducts business at Uniloc USA’s office in Newport, California.

16 21. Defendant VLSI Technology LLC (“VLSI”) claims to be a Delaware limited  
17 liability company with a registered office at Corporation Trust Center, 1209 Orange Street,  
18 Wilmington, Delaware.

19 22. Defendant INVT SPE LLC (“INVT”) claims to be a corporation existing under the  
20 laws of the State of Delaware with its principal place of business within this District at One Market  
21 Plaza, Spear Tower, 42<sup>nd</sup> Floor, San Francisco, California.

22 23. Defendant Inventergy Global, Inc. (“Inventergy”) claims to be a Delaware  
23 corporation with its principal place of business within this District at 19925 Stevens Creek  
24 Boulevard, Cupertino, California.

25 24. Defendant IXI IP, LLC (“IXI IP”) claims to be a New York limited liability  
26 company with its principal place of business located at 825 Third Avenue, 2nd Floor, New York,  
27 New York.



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25. Defendant Seven Networks, LLC (“Seven Networks”) claims to be a Delaware limited liability company with its principal place of business at 2660 East End Boulevard South, Marshall, Texas.

**JURISDICTION AND VENUE**

26. This Court has jurisdiction over the federal claims alleged under 28 U.S.C. §§ 1331 and 1337(a). This Court has jurisdiction over the unfair competition claims arising under state law pursuant to 28 U.S.C. § 1367(a). The Court may grant declaratory relief in this action pursuant to at least 28 U.S.C. §§ 2201 and 2202 and 15 U.S.C. § 26.

27. Venue is proper in this District pursuant to, at least, 15 U.S.C. § 22 and/or 28 U.S.C. § 1391(b) and (c) because, during the relevant period, Defendants resided, transacted business, were found, or had agents in this District, and/or because a substantial portion of the affected interstate trade and commerce described herein has been carried out in this District. In particular, Intel and Apple have addressed Defendants’ anticompetitive conduct described herein from their headquarters in this District, including addressing licensing demands and coordinating the defense of Defendants’ litigation, much of which has occurred in this District. Further, Eran Zur, a Managing Director in Fortress’s San Francisco office, runs Fortress’s Intellectual Property Group, which has directed and controlled the anticompetitive conduct described herein.

28. This Court has personal jurisdiction over each Defendant based on its national contacts with the United States as a whole pursuant to 15 U.S.C. § 22, as well as Defendants’ relevant contacts with this judicial district. Defendants have conducted and continue to conduct business in this District and/or have engaged in continuous and systematic activities in this District, including licensing activities, demands, negotiations, and litigation directly or through their agents. Defendants have minimum contacts with this forum such that the exercise of jurisdiction over them would not offend traditional notions of fair play and substantial justice.

**I. FORTRESS’S ANTICOMPETITIVE PATENT AGGREGATION SCHEME, GENERALLY**

29. Fortress describes its investing approach as “making control-oriented investments

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1 in cash flow generating assets.”<sup>12</sup> When it comes to patent investments, Fortress has taken its  
2 “control-oriented” approach to an extreme. Fortress’s model is to condition its investments in  
3 PAEs on terms so severe that the PAEs have no choice but to make aggressive and reckless patent  
4 assertions to attempt to generate the revenue required to meet their obligations to Fortress. When  
5 they fail to do so—as is often the case—Fortress steps in and assumes even more control and/or  
6 ownership of the patents, allowing it to ratchet up the aggressiveness of the assertions. In other  
7 instances, such as with VLSI, Fortress has skipped this intermediary step of finding a partner to  
8 do its bidding and acquired patents through a subsidiary outright from the start. The result is that  
9 Fortress has either acquired or controls a portfolio of well over a thousand U.S. patents for high-  
10 tech consumer and enterprise electronic devices and components or software therein and processes  
11 used to manufacture them to deploy against its targets. And by controlling patents across several  
12 PAEs (including those with which Fortress’s relationship is not readily apparent), Fortress  
13 conceals the true scope of its patent portfolio.

14 30. Fortress has targeted suppliers of high-tech consumer and enterprise electronic  
15 devices or components or software for such devices because they provide attractive targets for  
16 repeated and meritless assertions through which Fortress and its PAEs seek to monetize the  
17 elimination of competition from their patent aggregation scheme. An article co-authored by Eran  
18 Zur, Managing Director of the Intellectual Property Finance Group at Fortress, observes that courts  
19 can grant “oversized awards” in the technology sector that “stem from the sheer complexity of  
20 interoperable components and systems sold as part of functional units, if not integrated devices.”<sup>13</sup>  
21 Further, the article notes that “because technology invention tends to be incremental, to the extent  
22 an individual patent owner can be awarded damages on the price of the *entire end product* as  
23 opposed to their specific patent claim, a litigation incentive arises.”<sup>14</sup> That litigation incentive is  
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25 <sup>12</sup> Fortress, <https://www.fortress.com/businesses/private-equity> (last visited Aug. 4, 2020).

26 <sup>13</sup> Eran Zur, *Why Investment-friendly Patents Spell Trouble for Trolls*, (Sept. 24, 2015),  
27 <https://knowledge.wharton.upenn.edu/article/why-investment-friendly-patents-spell-trouble-for-trolls/> (last visited Nov. 15, 2019).

28 <sup>14</sup> *Id.* (emphasis added).

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1 coupled with what the article notes are “the substantial legal costs to defend a patent infringement  
2 suit,” creating a situation in which “speculative behavior drives an ever-inflating price ceiling  
3 (given the possibility of oversized damages) [and] a price floor becomes set by the extreme  
4 expense of litigation defense, marked at just under nuisance value.”<sup>15</sup>

5 31. Further, aggregating a massive portfolio of electronics patents allows Fortress and  
6 its PAEs to amass a range of patents that are both substitutes for and complements to one another.<sup>16</sup>  
7 When a company wants to build an electronic device, such as a smartphone, there are many ways  
8 to do so. Each alternative requires multiple technologies. However, the alternatives do not require  
9 the same combination of technologies. For example, Alternative 1 might require technologies A,  
10 B and C, while Alternative 2 might require technologies D, E and F. The technologies used for  
11 Alternative 1 (A, B and C) are complements: they are each needed to create the device using  
12 Alternative 1. Similarly, the technologies used for Alternative 2 (D, E, and F) are complements.  
13 The technologies comprising Alternative 1 are also a substitute for the technologies comprising  
14 Alternative 2, because the bundle of technologies used in Alternative 1 can be used as a substitute  
15 for the bundle of technologies used in Alternative 2.

16 32. There are many possible permutations of complement and substitute technologies  
17 for electronics patents. For instance, Alternative 3 might require technologies A, C, and D. In that  
18 scenario, the technologies bundled in Alternative 3 are a substitute for the technologies bundled in  
19 Alternatives 1 and 2 respectively; A, C, and D are complements in the production of Alternative  
20 3; and technology D is a substitute for technology B. Technologies can thus be both substitutes  
21 and complements. If Alternative 4 used technologies A, B, and D, then B and D are complements  
22 for Alternative 4, but D and B are also substitutes that if switched would change Alternative 1 to  
23 Alternative 3. Holding a broad array of patents that can act as both substitutes and complements  
24 in different circumstances allows Fortress and its PAEs flexibility to stifle competition in a variety  
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26 <sup>15</sup> *Id.*

27 <sup>16</sup> Substitute patents are not necessarily mutually exclusive alternatives to one another for all  
28 purposes. Substitute patents cover technologies that, possibly among other uses, provide  
alternative approaches to perform a common function.

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1 of ways and against a variety of electronic device suppliers.

2 33. Some of the technologies that can be used to make an electronic device are patented.  
3 But even with the most diligent approach to assessing the patent landscape for a product, it is  
4 challenging to determine whether certain technologies included in the device are patented,  
5 including because the scope of patent claims and the patent claim's validity and enforceability may  
6 be uncertain before litigation.

7 34. When this array of patents is held by multiple owners that product suppliers can  
8 play off against one another in patent license negotiations, each patent owner would only assert a  
9 patent if the expected value of doing so was net positive. "Weak" patents that have questionable  
10 validity, infringement, enforceability, and/or are easily designed around, and therefore have little  
11 or no meaningful value, are either not asserted, or are asserted to demand a license at an amount  
12 that is commensurate with the value of the patent's inventive merits.

13 35. Faced with a patent asserted against its device, the supplier can typically either take  
14 a license to the patent or refuse to license and license from an owner of a substitute patent or litigate  
15 the infringement claim. Regardless of which course is taken, the feasibility of designing around  
16 the asserted patent will affect the outcome because the supplier will not pay the patent owner a  
17 royalty greater than the cost to design around the patent.

18 36. When patents are aggregated as Fortress has done, the dynamics for determining  
19 whether to assert a patent change and the options available to the target of the assertion also  
20 change—which have harmful impacts on competition.

21 37. First, the scope of Fortress's aggregation and its focus on electronics patents  
22 ensures that it can exercise market and hold-up power obtained or accentuated through its patent  
23 aggregation scheme that eliminated alternatives sources of substitute patents. Defendants have  
24 acquired substitute patents, many of which are itemized below, that, before aggregation, competed  
25 with each other. When the patents were held by their original owners, there was competition and  
26 a prospective licensee could choose between competing options (or forego those options and  
27 design its product in a different way). But now, with the patents under the control of Fortress, the  
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1 prospect of competition or redesigning products is improperly diminished or disappears. Fortress  
2 and its PAEs can thus threaten a target with the serial risk that the only or next best alternative  
3 design to an asserted patent is also subject to a patent claim by one of Fortress's PAEs.

4 38. Second, aggregation and the resulting elimination of competition elevate the value  
5 of asserting weak patents by Fortress-backed PAEs, untethered to the value of the patents  
6 themselves. Before aggregation, there would be no incentive to assert such patents because there  
7 would be no expectation of a positive return from asserting a weak patent because the patent could  
8 be expected to be proven invalid, not infringed, or unenforceable in litigation, or would be easily  
9 designed around. But, after aggregation, assertion of weak patents as part of a wave of assertions  
10 against a target generates economic value even if many of those assertions are defeated in  
11 litigation. By increasing the volume of assertions a target faces, Fortress and its PAEs cause targets  
12 to deploy licensing and litigation resources less efficiently and thereby increase the value of  
13 litigation to Fortress and its PAEs. In particular, Fortress and its PAEs increase the likelihood that  
14 a weak patent will slip through litigation and be found infringed, valid, and enforceable when it  
15 should not be. Further, this strategy creates incentives for targets to settle with Fortress-backed  
16 PAEs for amounts that exceed the value (if any) of their patents to put an end to this risk. In this  
17 manner, Fortress's patent aggregation enables the use of weak patents to force targets to pay  
18 undeserved and inflated royalties.

19 39. Patent aggregators often claim they are more efficient at enforcing patents than  
20 other licensors and that their greater efficiency results in higher payments to inventors and  
21 therefore in more innovation. But there is no efficiency associated with patent aggregation in the  
22 Fortress assertion model described herein. To the contrary, patent licensing becomes less efficient  
23 with this type of abusive patent aggregation because the targets waste resources to defend against  
24 meritless assertions.

25 40. Aggregating patents in the way that Fortress has done harms competition. First, by  
26 aggregating patents covering technologies that are alternatives for one another, Fortress injures  
27 competition in the same way as any merger or combination of competitors that lessens competition.  
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1 Before aggregation, when multiple parties held such patents, those parties competed with one  
2 another to license the patents, and licensees benefited from that competition through more  
3 favorable licensing terms. Multiple holders of substitute patents were forced to compete with each  
4 other to offer better terms to secure licensees. Once Fortress and the other Defendants aggregated  
5 the patents, however, that competition was improperly reduced or eliminated, resulting in a  
6 diminished or eliminated set of alternative suppliers of substitute patents to maintain royalties and  
7 licensing output at competitive levels.

8 41. Second, Fortress introduces a new cost to suppliers of electronic devices and the  
9 components and software for those devices that dampens incentives for product suppliers to invest  
10 in research and development to drive innovation, thereby undermining innovation, reducing  
11 competition, and harming end consumers. End products are made more expensive and/or less  
12 innovative as a result of Defendants' conduct. Those competitors might have previously owned  
13 some of the patents aggregated by Fortress but were unable to impose such high costs on suppliers  
14 using technologies claimed by the patents when the patents were not aggregated into a massive  
15 portfolio encompassing substitute and complement patents. Fortress's aggregation thus  
16 undermines competition in the sales of electronic devices and components and software for those  
17 devices.

18 42. Third, the higher royalty payments that Fortress and its PAEs generate reward the  
19 creation of patents that are not actually inventive or are not actually used. Thus, the higher  
20 royalties that patent aggregation generates do not incent welfare-enhancing additional innovation.  
21 At the same time, the inflated royalties and litigation costs tax invention by product suppliers, thus  
22 reducing innovation in downstream product markets and harming end consumers.

23 43. Fourth, Fortress's hold-up power is amplified by the uncertainty it creates through  
24 the size of the portfolio it controls and obfuscation regarding the scope of that portfolio. After  
25 aggregation, potential licensees lose the ability to decipher the extent to which Fortress controls  
26 patents that they may actually have wanted to license ex ante or that would be substitutes to  
27 asserted patents. By way of example, Fortress employees are listed as managing members or  
28

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1 directors of companies that otherwise have no publicly known ties to Fortress. Mysterious patterns  
2 emerge such as entities with names connoting an unspecified relationship with Fortress, by a prefix  
3 “CF.” District court judges have gone so far as having to compel Defendants to reveal the  
4 ownership history of the asserted patents and the degree to which Fortress held rights in, and  
5 control over, those patents. The effect is that the hold-up power of asserted patents is imbued on  
6 other patents Fortress controls. Thus, rather than fostering pro-competitive patent licensing,  
7 Fortress’s aggregation scheme reduces potential licensees’ ability to obtain licenses to any patents  
8 they might be interested in licensing while simultaneously elevating the value of weak patents.

9 44. Fortress’s use of a web of separate PAEs to disperse and enforce the portfolio also  
10 ensures that there is no single entity that can offer a comprehensive license to the Fortress portfolio  
11 and thereby increases the number of transactions necessary for licensees to attempt to secure patent  
12 peace or the number of litigations that Defendants can bring. Defendants benefit from increasing  
13 the number of transactions because the more transactions, the more opportunities that they have to  
14 extract anticompetitive royalties that are not reflective of the value of the patents being licensed.  
15 The same goes for litigation—the more cases that Defendants bring, the more opportunities they  
16 create for mistaken findings of infringement or coercive settlements.

17 45. Distributing the patents across a network of PAEs, rather than having Fortress  
18 directly own and assert them, is also intended to limit the exposure of Fortress and the broader  
19 portfolio to potential blowback from aggressive assertions. For example, to the extent that one of  
20 Fortress’s PAEs is subject to an award of significant sanctions or attorneys’ fees, Fortress could  
21 decide either to cut its losses or that it is worth continuing to fund the PAE to pursue further  
22 assertions.

23 46. Moreover, PAEs can benefit in litigation from having had no role in prosecuting  
24 patents that they obtained from operating companies. The result is that it can be difficult for a  
25 defendant to obtain evidence and to mount a complete defense to a PAE’s assertion—thereby  
26 increasing the likelihood of a mistaken verdict of infringement or failure to find unenforceability.

27 47. There is nothing inherently illegal with owning many patents or obtaining those  
28



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1 patents through acquisition. But Fortress's patent aggregation scheme is unlike the development  
2 of patent portfolios by operating companies that use patents to safeguard their ability to offer their  
3 own products and services free from infringement by others. And it is different, too, from a  
4 company acquiring patents for the purpose of licensing based on the intrinsic value of those  
5 patents. Both of those scenarios have the potential to increase output and lower prices by putting  
6 patents to efficient use. But Fortress's aggregation is intended for an anticompetitive purpose—  
7 through patent acquisitions that eliminate competition, Fortress invests in patents at costs lower  
8 than the hold-up value of the patents to ensnare as many potential licensees and to allow it and the  
9 other Defendants to assert as many possible claims of infringement to tax the commercial use of  
10 existing technology at rates beyond the actual value (if any) of the aggregated patents. And  
11 Fortress's aggregation scheme has had its intended anticompetitive effects, capturing hold-up  
12 values that exceed the values at which Fortress or the other Defendants acquired the patents,  
13 leading to reduced output.

14 48. Nor are the transfers of patents at issue here typical sales that place patents in the  
15 hands of new owners that intend to practice them to develop their businesses or to license them  
16 based on their technical merit to generate revenue. Instead, Defendants' transfers are made with  
17 the purpose and effect of stifling competition by allowing Fortress and the other Defendants to  
18 extort supracompetitive royalties unrelated to the value (if any) of the Fortress-controlled patents.

19 49. Transferring patents from operating companies to Fortress and its PAEs reduces or  
20 eliminates competitive constraints that would otherwise have restricted the ability of the former  
21 owners to impose onerous licensing terms when they asserted the patents. Product companies  
22 generally sell a range of products in competition with other companies, and their ability to sell any  
23 of them is constrained by the competition faced by all the products. A product company knows  
24 that if it acts too aggressively or rapaciously toward the customers of some of its products, those  
25 customers and others will be more likely to buy other types of products offered by the company  
26 from other companies that have not been so aggressive. In that way, competition in the sale of one  
27 product constrains the prices of other products, and the product companies selling such products  
28

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1 will have a strong competitive incentive to maintain a positive industry reputation and good  
2 customer relationships over the full range of their products. For example, infringement actions by  
3 component or software suppliers against customers or potential customers will limit prospects for  
4 future sales. Suits by electronic device suppliers against suppliers or potential suppliers of  
5 components or software could jeopardize their ability to source essential components or software  
6 for their devices. Reputational and relational harm from filing repeated, baseless infringement  
7 suits will limit product companies' ability to participate effectively in collaborative industry  
8 initiatives, such as standard setting or other industry endeavors. Because transfers of patents from  
9 product companies to Fortress and its PAEs lessen or eliminate these and other constraints and  
10 place the patents with a party with different incentives, those transfers result in inflated royalties  
11 or other less favorable licensing terms. Transfers to Fortress and its PAEs—companies that  
12 produce no products and thus face no risk of patent countersuits from their targets—place patents  
13 in the hands of entities that face no such competitive constraints and that are thus free to maximize  
14 their profits through aggressive litigation campaigns. Moreover, Fortress's use of obfuscation and  
15 a web of PAEs heightens the anticompetitive effects of such transfers. That Fortress and its PAEs  
16 have repeatedly entered patent transfer agreements with no efficiency rationale and those  
17 agreements have resulted in inflated royalties is direct proof of the anticompetitive effects of those  
18 transfers.

19 50. Further, when Defendant PAEs entered into the agreements described below with  
20 Fortress and/or its affiliate Fortress Credit, they understood that the transaction would enable  
21 Fortress to aggregate substitute and complementary patents to eliminate competition existing when  
22 those patents were held by PAEs that were competing independently with one another and not  
23 under common Fortress control. The PAEs received compensation in the form of favorable terms,  
24 reflecting the fact that the PAEs were sharing in the supracompetitive royalties Defendants obtain  
25 by eliminating competition. Thus, each of the Defendants entered into separate agreements with  
26 Fortress with a common objective with Fortress to eliminate competition and reap the rewards  
27 from doing so.  
28

**REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED****A. Fortress and the Uniloc Defendants**

51. On December 30, 2014, Fortress Credit entered into a Revenue Sharing and Note and Warrant Purchase Agreement (“Uniloc-Fortress Revenue Sharing Agreement”) with Uniloc Luxembourg and Uniloc USA. Under the Uniloc-Fortress Revenue Sharing Agreement, Fortress provided a loan to Uniloc USA in exchange for a share of future licensing revenue from its patent portfolio. If Uniloc USA failed to timely make a required payment to Fortress or any other “Event of Default” occurred, Fortress had the right to accelerate the full payments owed by Uniloc USA.

52. Fortress also entered into a Patent License Agreement with Uniloc Luxembourg and Uniloc USA on December 30, 2014. The License granted Fortress “a non-exclusive, transferrable, sub-licensable, divisible, irrevocable, fully paid-up, royalty-free, and worldwide license to the Licensed Patents, including, but not limited to, the rights to make, have made, market, use, sell, offer for sale, import, export and distribute the inventions disclosed in the Licensed Patents and otherwise exploit the Licensed Patents in any lawful manner in *Licensee’s sole and absolute discretion* solely for the benefit of the Secured Parties (‘Patent License’), provided that Licensee shall only use the Patent License following an Event of Default.”<sup>17</sup>

53. Fortress later took steps to control even more directly the assertion of the Uniloc Luxembourg and Uniloc USA patents. On February 23, Fortress formed Uniloc 2017 and Uniloc 2017’s parent corporation, CF Uniloc Holdings LLC, in order for Fortress to direct and control the assertion of Uniloc patents. James K. Noble, who was previously Fortress’s Secretary, signed the certificates of formation for both Uniloc 2017 and CF Uniloc Holdings LLC.

54. On May 3, 2018, Uniloc Luxembourg assigned nearly 600 patents to Uniloc 2017 pursuant to a March 28, 2018 Asset Purchase Agreement. Constantine Dakolias signed the agreement as President of Uniloc 2017. Mr. Dakolias is also Co-Chief Investment Officer, Credit Funds at Fortress.

55. As one court observed about the various transfers of patents and agreements

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<sup>17</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 3:18-CV-00360 (N.D. Cal. Feb. 15, 2019) (WHA), Dkt. 167-4 (emphasis added).

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1 between the Uniloc entities: “The Court suspects that Uniloc’s manipulations in allocating rights  
2 to the patents-in-suit to various Uniloc (possibly) shell entities is perhaps designed to insulate  
3 Uniloc Luxembourg from any award of sanctions in the event Uniloc loses this litigation (or some  
4 substantial part thereof).”<sup>18</sup>

5 56. In entering the Uniloc-Fortress Revenue Sharing Agreement and Patent License  
6 Agreement in 2014, Fortress, Uniloc USA, and Uniloc Luxembourg understood that the  
7 agreements would enable aggregation of substitute and complementary patents under Fortress’s  
8 control, and Uniloc USA and Uniloc Luxembourg understood they benefitted by contributing to  
9 Fortress’s scheme, including by sharing in supracompetitive royalties that would be extracted by  
10 virtue of eliminating competition. As Fortress, Uniloc USA, and Uniloc Luxembourg understood,  
11 the 2018 Asset Purchase Agreement, by which patents were ultimately transferred to Uniloc 2017,  
12 further facilitated these objectives. As a result, at least the substitute and complementary patents  
13 described in detail below have been aggregated under Fortress’s control.

14 57. The patents that Uniloc Luxembourg assigned to Uniloc 2017 also included patents  
15 claimed to be standard-essential patents (“SEPs”) for cellular standards that originated with  
16 Koninklijke Philips Electronics N.V. (“Philips”). Philips had provided a commitment to the  
17 European Telecommunications Standards Institute (“ETSI”) to license any of its essential patents  
18 on fair, reasonable, and non-discriminatory (“FRAND”) terms and conditions. The patents were  
19 subsequently transferred to the PAE Pendragon Wireless in 2012 and then to Uniloc Luxembourg  
20 in 2018 before ultimately being transferred to Uniloc 2017 in 2018.

**B. Fortress and VLSI**

22 58. Fortress strategized for six months before undertaking the creation of VLSI and  
23 causing the transfer of patents to VLSI.<sup>19</sup> Among the options Fortress considered was a  
24 “Privateering Option” in which the patents would be transferred to a new entity from their prior  
25

26 <sup>18</sup> *Uniloc 2017 LLC v. Google LLC*, No. 2:18-cv-00553 (E.D. Tex. Jul. 1, 2019), subsequently  
27 transferred as No. 5:20-cv-05346 (N.D. Cal.) (SVK), Dkt. 28 Exhibit V.

28 <sup>19</sup> *VLSI Technology LLC v. Intel Corporation et al*, No. 5:18-mc-80193 (N.D. Cal. Jan. 1, 2019)  
(NC), Dkt 31.

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owner to carry out enforcement. Another option was the “Corporate Carve Out” in which Fortress would purchase a division of the former owner along with some of its patents. Ultimately, Fortress settled on the Privateering Option, to be accomplished through the creation of VLSI to obtain patents from the former owner and then assert them in litigation. The terms of the arrangement were spelled out in a Patent Purchase and Cooperation Agreement.

59. Fortress formed VLSI on June 27, 2016. VLSI’s formation document is signed by Marc K. Furstein, Fortress’s Managing Director, President of the Credit Funds & Chief Operating Officer of Credit Funds. Two days after VLSI’s formation, Justin Klein (then Chief Financial Officer of Fortress’s credit arm) formed CF VLSI Holdings LLC (“VLSI Holdings”). VLSI is a subsidiary of VLSI Holdings. That VLSI ultimately operates at the behest of Fortress is further evidenced by the signature of Eran Zur, Managing Director of Fortress’s Intellectual Property Group and an “authorized signatory” for VLSI, on several documents assigning patents to VLSI.

60. VLSI holds nearly 200 U.S. patents and began receiving them pursuant to an August 16, 2016 assignment. Mr. Zur signed a certain number of the patent assignment agreements on behalf of VLSI. VLSI acquired additional patents from the same prior owner in later tranches, including in April 2017, December 2017, December 2018, and February 2019. In nearly every tranche, VLSI acquired patents that are closely related to patents it had acquired in prior tranches, and that are substitutes and/or complements of patents held by other Defendants, which are also under Fortress’s control, as described in detail below.

61. Neither VLSI nor VLSI Holdings manufactures or sells any products. At least as of June 2019, VLSI had a single employee—its Chief Executive Officer, Michael Stolarski. Mr. Stolarski is an attorney who worked at several law firms before becoming the CEO of VLSI.

**C. Fortress, Inventergy, and INVT**

62. In May 2013, Inventergy acquired over 180 patents from Huawei Technologies Co. (“Huawei”) claimed to relate to IP Multimedia Subsystem (IMS) and Voice over IP (VoIP). Inventergy acquired the Huawei patents subject to certain ongoing payment obligations to Huawei, including to make a one-time payment when a certain revenue threshold was obtained by licensing

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1 the patents and also to share a certain percentage of the quarterly net revenue earned by licensing  
2 the patents.

3 63. In October 2013, Inventergy acquired nearly 500 patents from Panasonic  
4 Corporation (“Panasonic”) claimed to relate to 3G and 4G mobile telecommunications. Inventergy  
5 acquired the Panasonic patents subject to an obligation to share a certain percentage of the  
6 quarterly net revenue earned on the patents with Panasonic, including to make certain guaranteed  
7 payments. Inventergy agreed that if it failed to make the guaranteed payments by a specified date,  
8 Panasonic could charge it late fees and Panasonic may have the right to collect interest and in  
9 certain circumstances to terminate the agreement under which the patents were transferred to  
10 Inventergy. As described further below, a number of the Panasonic patents are claimed to be  
11 essential to cellular standards and subject to commitments to license them on FRAND terms and  
12 conditions.

13 64. In May 2014, Inventergy acquired approximately 80 patents claimed to be related  
14 to IMS and VoIP from Nokia Corporation (“Nokia”). As consideration, Inventergy agreed to make  
15 cash payments to Nokia on or before October 1, 2014, June 1, 2015, and June 1, 2016.

16 65. On October 1, 2014, affiliates of Fortress—DBD Credit Funding, LLC and CF DB  
17 EZ LLC—entered a Revenue Sharing and Note Purchase Agreement with Inventergy and its  
18 wholly-owned subsidiary, Inventergy, Inc. Through the arrangement, Fortress provided \$11  
19 million in financing to Inventergy, consisting of \$10 million in debt financing and \$1 million in  
20 sale of stock. As Inventergy informed its shareholders, the Fortress funds were “applied towards  
21 the repayment of existing debt obligations and improvement of our capital structure.”

22 66. In exchange for Fortress’s investment, Inventergy agreed to apply revenues  
23 generated from patent monetization to repayment of the investment and, further, to provide  
24 Fortress with an additional portion of Inventergy’s licensing revenues. If Inventergy failed to  
25 make the required payments, it could default under the agreement. As Inventergy subsequently  
26 warned its shareholders: “In the case of a default, Fortress could accelerate our obligations under  
27 the Fortress Agreement and exercise their right to foreclose on their security interests, which could  
28

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1 force us to cease operations.”

2 67. Fortress’s backing emboldened Inventergy to aggressively pursue licensing targets,  
3 including through its wholly-owned subsidiary Inventergy, Inc. As Sonus Networks alleged in a  
4 case against Inventergy, Inventergy’s CEO Joe Byers told Sonus in January 2015 that “Fortress[,]  
5 does not settle” in litigation and that if Sonus Networks declined to take a license, it would face  
6 “an IP bloodbath.”

7 68. On December 22, 2016, Inventergy entered a Restructuring Agreement to amend  
8 the Revenue Sharing and Note Purchase Agreement. As Inventergy explained the consequences  
9 of the Restructuring Agreement, Inventergy would contribute patents, and “Fortress will have the  
10 sole discretion to make any and all decisions relating to [Inventergy’s] patents and patent  
11 monetization activities (excluding future acquired patents related to Inventergy Innovations, LLC,  
12 a subsidiary of Parent, and related monetization activities) (such patents that are subject to the  
13 Restructuring Agreement, the ‘Patents’), including the right to license, sell or sue unauthorized  
14 users of the Patents.”<sup>20</sup>

15 69. Further, the Restructuring Agreement modified the revenue sharing arrangement to  
16 provide that after making certain required payments, including to Nokia, Huawei, and Panasonic,  
17 Fortress would receive proceeds “until Fortress has received (x) reimbursement of any amounts  
18 advanced by Fortress pursuant to the Restructuring Agreement plus 20% annual interest on such  
19 advances plus (y) \$30.5 million less any amounts paid to Fortress for the Note Obligations under  
20 the Revenue Sharing and Note Purchase Agreement after December 22, 2016” and “after all of the  
21 foregoing payment obligations are satisfied, 70% to Fortress and 30% to the Company.”  
22 Inventergy announced the Restructuring Agreement as an arrangement “under which Fortress may  
23 fund, at its discretion, an enhanced enforcement program to further monetize Inventergy’s 740  
24 telecommunications patent assets that the Company previously acquired from Panasonic, Nokia  
25

26 \_\_\_\_\_  
27 <sup>20</sup> Inventergy Global, Inc., Form 8-K at Item 1.01 (Dec. 29, 2016), available at  
28 [https://www.sec.gov/Archives/edgar/data/1084752/000114420416141761/v455943\\_8k.htm](https://www.sec.gov/Archives/edgar/data/1084752/000114420416141761/v455943_8k.htm) (last  
accessed Aug. 4, 2020).



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1 and Huawei.”<sup>21</sup>

2 70. As a result of the Restructuring Agreement, Inventergy and a Fortress affiliate, CF  
3 INVT Holdings LLC, on April 27, 2017 formed INVT. At least portions of Inventergy’s patent  
4 portfolio were assigned to INVT the same day. Mr. Dakolias, Co-Chief Investment Officer, Credit  
5 Funds at Fortress, is the President of CF INVT Holdings LLC, and signed INVT’s Limited  
6 Liability Company agreement on behalf of INVT and CF INVT Holdings LLC. Michele  
7 Moreland, a Director at Fortress, serves as the Licensing Officer of Defendant INVT SPE.

8 71. Before it entered the October 2014 Revenue Sharing and Note Purchase Agreement  
9 with Fortress affiliates, Inventergy had already aggregated substitute and complementary patents  
10 in the telecommunications space. In entering the October 2014 agreement, as well as the  
11 December 2016 Restructuring Agreement, Fortress and Inventergy understood that the agreements  
12 would aggregate those substitute and complementary patents with other substitute and  
13 complementary patents under Fortress’s control, and Inventergy understood that it benefitted by  
14 contributing to Fortress’s scheme, including by sharing in supracompetitive royalties that would  
15 be extracted by virtue of eliminating competition. The April 2017 transfer of Inventergy’s patents  
16 to INVT facilitated these objectives. As a result, at least the substitute and complementary patents  
17 described in detail below have been aggregated under Fortress’s control.

18 **D. Fortress and IXI IP**

19 72. On April 2, 2014, IXI IP was formed in New York. IXI IP is a patent assertion  
20 entity that received patents from IXI Mobile (R&D) Ltd. (“IXI R&D”) on June 5, 2014, less than  
21 two weeks before filing its first suit against Apple. The same day IXI IP received the transfer, it  
22 licensed the patents back to IXI R&D.

23 73. Also on June 5, 2014, IXI IP assigned a security interest in each of the patents it  
24 received from IXI R&D to Fortress Credit. In entering the agreement that gave rise to assignment  
25 of a security interest in IXI IP’s patents to Fortress Credit, Fortress (and Fortress Credit) and IXI  
26

27 \_\_\_\_\_  
28 <sup>21</sup> *Id.*

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1 IP understood that the agreement would result in aggregation of substitute and complementary  
2 patents under Fortress's control (as further detailed below), and IXI IP understood it benefited by  
3 contributing to Fortress's scheme, including by sharing in supracompetitive royalties that would  
4 be extracted by virtue of eliminating competition.

5 74. Three months later, on September 11, 2014, Fortress Credit Co. DBD LLC assigned  
6 its interest to FCO V CLO Transferor LLC, another Fortress subsidiary.

7 **E. Fortress and Seven Networks**

8 75. Seven Networks was originally incorporated in Delaware in 2000 as a mobile  
9 messaging company under the name Seven Networks Inc. Seven Networks Inc. subsequently  
10 registered to conduct business in Texas in 2005.

11 76. Fortress was formerly an investor in Seven Networks Inc. Fortress gained control  
12 of Seven Networks in 2015, after Seven Networks unsuccessfully attempted to monetize its patent  
13 portfolio by offering its patents as well as its entire company for evaluation and sale to a number  
14 of entities, including Apple. In July 2015, Fortress converted Seven Networks Inc. to a limited  
15 liability company. Seven Network Inc.'s patents passed to Seven Networks at the time of the July  
16 2015 corporate conversion, thereby formally bringing additional substitute and complementary  
17 patents under Fortress's control, as described below.

18 77. Seven Network's parent is CF SVN LLC, a Delaware company formed on July 2,  
19 2015, and a Fortress subsidiary.

20 **F. Fortress and KIP CR P1**

21 78. Crossroads Systems, Inc. ("Crossroads") is a publicly-traded company that used to  
22 be in the business of licensing intellectual property.

23 79. In July 2013, Crossroads received a loan of up to \$10 million from Fortress Credit  
24 that was later assigned to another Fortress affiliate, CF DB EZ LLC. As part of the loan agreement,  
25 Crossroads assigned 109 granted or pending patents to a partnership, KIP CR P1 LP ("KIP CR  
26 P1"), formed by Crossroads and Fortress. The transferred patents were all of Crossroads' patents  
27 with the exception of one patent family (for U.S. Patent No. 5,941,972 ("972 patent")). As with  
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Fortress's other loan deals, Crossroads risked losing its interests in the transferred patents in an "Event of Default," including missing a payment to Fortress.

80. Crossroads was ultimately able to repay the loan to Fortress in October 2015 only when it made a deal to share revenue from the monetization of the '972 patent family with another company. But this arrangement was not enough for Crossroads to stay solvent. In August 2017, Crossroads announced that it had filed for Chapter 11 bankruptcy in order to restructure its business and attract new investment.

81. In the end, Fortress wound up acquiring all of Crossroads' patents. As part of its restructuring, Crossroads announced in November 2017 that it had sold its patent portfolio as well as related partnership interests to an "affiliate of Fortress Investment Group" to take over patent monetization efforts.<sup>22</sup> That Fortress affiliate was KIP CR P1. Fortress and Crossroads agreed to "share the proceeds from such efforts equally (after deducting expenses and a \$1.5 Million monetization hurdle)."<sup>23</sup>

## **II. LICENSING AND LITIGATION CAMPAIGNS**

82. Consistent with Fortress's intent, the PAEs it has created or in which it has invested have engaged in prolific patent assertions and litigation campaigns. The practice of serial litigations that Fortress's PAEs have pursued demonstrate that they have used litigation to impose a crushing burden on their targets, which has been made possible by aggregating substitute patents, rather than obtaining royalties based on their patents' inventive value. And as discussed below in Section III, it is already apparent that several of these cases involve assertions of substitute patents that have been aggregated under Fortress's control.

### **A. The Uniloc Defendants**

83. To date, the Uniloc Defendants have targeted Apple in 25 patent cases in the United States:

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<sup>22</sup> Crossroads Systems press release, *Crossroads Systems Sells Patent Portfolio to Affiliate of Fortress Investment Group*, Nov. 7, 2017.

<sup>23</sup> *Id.*

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- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:16-cv-00638 (E.D. Tex.)
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex.), subsequently transferred as 3:18-cv-00357 (N.D. Cal.) (LHK)
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00454 (E.D. Tex.), subsequently transferred as 5:18-cv-00358 (N.D. Cal.) (WHA) and 18-2094 (Fed. Cir.)
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00455 (E.D. Tex.), subsequently transferred as 3:18-cv-00359 (N.D. Cal.) (WHA)
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00457 (E.D. Tex.), subsequently transferred as 3:18-cv-00360 (N.D. Cal.) (WHA)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00469 (E.D. Tex.), subsequently transferred as 4:18-cv-00361 (N.D. Cal.) (PJH)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00470 (E.D. Tex.), subsequently transferred as 4:18-cv-00362 (N.D. Cal.) (PJH)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00522 (E.D. Tex.), subsequently transferred as 4:18-cv-00364 (N.D. Cal.) (PJH)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00534 (E.D. Tex.), subsequently transferred as 3:18-cv-00363 (N.D. Cal.) (WHA)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00535 (E.D. Tex.), subsequently transferred as 3:18-cv-00572 (N.D. Cal.) (WHA)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00571 (E.D. Tex.), subsequently transferred as 3:18-cv-00365 (N.D. Cal.) (WHA)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00708 (E.D. Tex.)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00158 (W.D. Tex.), subsequently transferred as 4:19-cv-01691 (N.D. Cal.) (JST)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00159 (W.D. Tex.), subsequently transferred as 5:19-cv-01692 (N.D. Cal.) (EJD)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00161 (W.D. Tex.), subsequently transferred as 4:19-cv-01693 (N.D. Cal.) (JST)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00163 (W.D. Tex.), subsequently transferred as 4:19-cv-01694 (N.D. Cal.) (JST)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00164 (W.D. Tex.), subsequently transferred as 5:19-cv-01695 (N.D. Cal.) (LHK)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00166 (W.D. Tex.), subsequently transferred as 4:19-cv-01696 (N.D. Cal.) (YGR)

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- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00293 (W.D. Tex.), subsequently transferred as 3:19-cv-01697 (N.D. Cal.) (VC)
- *Uniloc USA, Inc. et al v. Apple Inc.*, No. 1:18-cv-00296 (W.D. Tex.), subsequently dismissed without prejudice
- *Uniloc 2017 LLC et al v. Apple Inc.*, No. 1:18-cv-00838 (W.D. Tex.), subsequently refiled as 1:18-cv-00990, and subsequently transferred as 3:19-cv-01904 (N.D. Cal.) (WHO)
- *Uniloc 2017 LLC et al v. Apple Inc.*, No. 1:18-cv-00851 (W.D. Tex.), subsequently refiled as 1:18-cv-00989 (W.D. Tex.), and subsequently transferred as 3:19-cv-01905 (N.D. Cal.) (JD)
- *Uniloc 2017 LLC et al v. Apple Inc.*, No. 1:18-cv-00890 (W.D. Tex.), subsequently refiled as 1:18-cv-00992 (W.D. Tex.), and subsequently transferred as 4:19-cv-01949 (N.D. Cal.) (JSW)
- *Uniloc 2017 LLC et al v. Apple Inc.*, No. 1:18-cv-00907 (W.D. Tex.), subsequently refiled as 1:18-cv-00991 (W.D. Tex.), and subsequently transferred as 5:19-cv-01929 (N.D. Cal.) (EJD)
- *Uniloc 2017 LLC v. Apple Inc.*, No. 6:19-cv-00532 (W.D. Tex.)

84. The Uniloc Defendants have often filed these cases against Apple in waves, with the apparent aim of heightening the threat to Apple to increase leverage and extract a settlement. For example, in June 2016, Uniloc USA and Uniloc Luxembourg sued Apple on four patents; between April and October 2017, Uniloc USA and Uniloc Luxembourg sued Apple on another 16 patents; in February 2018, Uniloc USA and Uniloc Luxembourg sued Apple on another seven patents; in April 2018, Uniloc USA and Uniloc Luxembourg sued Apple on another two patents; and in October 2018, Uniloc 2017 and Uniloc Licensing USA LLC (“Uniloc Licensing USA”) sued Apple on another four patents.

85. Although Apple has been a favored target of the Uniloc Defendants, it has not been the only one. Since its creation in February 2017, Uniloc 2017 has been a plaintiff in more than 130 patent infringement suits. Its targets have included the following companies that supply high-tech consumer and enterprise electronic devices or components or software for such devices:

- Barnes & Noble, Inc.
- BlackBerry Corporation
- Cardo Systems, Inc.

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- Cisco Systems, Inc.
- Google LLC (“Google”)
- Hike Ltd.
- Huawei Devices USA
- LG Electronics USA, Inc.
- Samsung Electronics America, Inc.
- Terrano, LLC
- ZTE (USA), Inc.
- Netflix, Inc.
- Hulu

86. By targeting a broad number of suppliers of a particular electronics product—*e.g.*, smartphones—the Uniloc Defendants (as well as the other Defendants) increase the chances that the costs imposed on those suppliers will be internalized and passed along to consumers.

87. As with Apple, the Uniloc Defendants have targeted many of these companies in repeated lawsuits. Google, for example, has been a frequent target. On October 1, 2018, Uniloc 2017 and Uniloc Licensing USA filed four separate complaints against Google. Between October 31, 2018 and November 1, 2018, Uniloc 2017, Uniloc Licensing, and Uniloc USA filed another 10 separate complaints against Google. Later in November, the Uniloc entities dismissed those 14 complaints without prejudice and a different set of Uniloc entities—Uniloc 2017 and Uniloc USA—filed 14 new complaints against Google on the same 14 patents asserted in the prior complaints. In December 2018, Uniloc 2017 filed an additional seven complaints against Google, one of which it later dismissed. That amounts to a total of 35 lawsuits against Google by Uniloc entities over three months.

88. The three years so far of the Uniloc Defendants suing Apple has demonstrated Fortress’s scheme to assert endless, meritless litigation, which has been made feasible by the elimination of competition resulting from its patent aggregations. The four patents in the first Uniloc case against Apple have all been found unpatentable by the USPTO. The second Uniloc

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case against Apple revealed how little pre-suit diligence is taken before suing, when after suing, Uniloc Luxembourg voluntarily dismissed one of the three asserted patents and admitted that the “Patent is probably commercially worthless.”<sup>24</sup> It is no surprise that one judge described Uniloc USA’s infringement theories in a case as “bogus and conclusory.”<sup>25</sup> The examples below demonstrate the flaws in the Uniloc Defendants’ patents, including patents that have been found invalid in multiple ways by multiple adjudicators.

89. In one example of a Uniloc Defendant asserting invalid patents, Uniloc USA sued eight companies, including Apple, on a patent that two courts have found invalid and on which the PTAB has initiated an *inter partes* review. Uniloc USA asserted U.S. Patent No. 6,993,049 (the “’049 patent”), titled “Communication System,” in the following cases:

- *Uniloc USA, Inc. v. Apple Inc.*, No. 1:18-cv-00164 (W.D. Tex.), subsequently transferred as 5:19-cv-01695 (N.D. Cal.) (LHK)
- *Uniloc USA, Inc. v. Samsung Electronics America, Inc.*, No. 2:18-cv-00040 (E.D. Tex.)
- *Uniloc USA, Inc. v. Logitech, Inc.*, No. 5:18-cv-01304 (N.D. Cal.) (LHK)
- *Uniloc USA, Inc. v. LG Electronics USA, Inc.*, No. 3:18-cv-00559 (N.D. Tex.), subsequently transferred as 5:18-cv-06738 (N.D. Cal.) (LHK)
- *Uniloc USA, Inc. v. Huawei Device USA, Inc.*, No. 2:18-cv-00074 (E.D. Tex.)
- *Uniloc USA, Inc. v. ZTE (USA), Inc.*, No. 2:18-cv-00307 (E.D. Tex.), subsequently transferred as 3:18-cv-02839 (N.D. Tex.)
- *Uniloc USA, Inc. v. Blackberry Corp.*, No. 3:18-cv-01885 (N.D. Tex.)
- *Uniloc USA, Inc. v. Microsoft Corp.*, No. 8:18-cv-01279 (C.D. Cal.)

90. On April 5, 2019, a court in the Eastern District of Texas held that there were multiple bases to conclude that asserted claims 1 and 8 of the ’049 patent are indefinite.<sup>26</sup> On July 2, 2019, Uniloc USA, Uniloc Luxembourg, and Uniloc 2017 jointly filed with defendants Huawei

<sup>24</sup> Patent Owner Preliminary Response to Petition, *Unified Patents Inc. v. Uniloc Luxembourg, S.A.*, IPR2017-01850, Paper No. 6 (PTAB Nov. 30, 2017).

<sup>25</sup> Transcript of Proceedings, *Uniloc USA, Inc. v. Apple Inc.*, No. 3:18-cv-00359 (N.D. Cal. June 28, 2018) (WHA).

<sup>26</sup> Claim Construction Memorandum and Order, *Uniloc USA, Inc. v. Samsung Elecs. America, Inc.*, Nos. 2:18-cv-00040, 2:18-cv-00074 (E.D. Tex. Apr. 5, 2019).



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1 Device USA, Inc. and Huawei Device Co. Ltd a Joint Motion to Dismiss with Prejudice, in which  
2 dismissal of the Uniloc Defendants’ claims was sought to be “conditioned on the Court’s vacating  
3 the Claim Construction Memorandum Opinion and Order . . . entered April 5, 2019.”<sup>27</sup> By seeking  
4 to dismiss without prejudice, the Uniloc Defendants attempted to avoid having final judgment  
5 entered finding the ’049 patent invalid, allowing the Uniloc Defendants to continue to pursue  
6 baseless claims using that patent. The court denied the Uniloc Defendants’ ploy, ordering on July  
7 9, 2019 that the parties were to file a “new motion to dismiss that is not conditioned upon the Court  
8 vacating the Claim Construction Memorandum Opinion and Order.”<sup>28</sup>

9 91. Finally, on July 22, 2019, the PTAB instituted an *inter partes* review of the ’049  
10 patent, concluding that Apple’s “Petition establishes a reasonable likelihood that [Apple] would  
11 prevail in showing claims 11 and 12 [of the ’049 patent] are unpatentable” as obvious in light of  
12 multiple prior art references.<sup>29</sup> In its Final Written Decision, the PTAB found all challenged claims  
13 to be unpatentable.<sup>30</sup>

14 92. The ’049 patent is far from the only invalid patent the Uniloc Defendants assert in  
15 litigation. For example, the Uniloc Defendants have asserted U.S. Patent Nos. 6,868,079 (“the  
16 ’079 patent”), 7,020,106 (“the ’106 patent”), 7,020,252 (“the ’252 patent”), and 7,167,487 (“the  
17 ’487 patent”) in at least forty-one litigations, including in those against Apple.

18 93. Following the Uniloc Defendants’ lawsuits against Apple based on the ’079, ’106,  
19 ’252, and ’487 patents, Apple petitioned for *inter partes* review of the relevant patent at-issue. In  
20 nearly every instance, the PTAB instituted review and found all challenged claims to be  
21 unpatentable: The PTAB concluded that all challenged claims of the ’487 patent<sup>31</sup> and the ’079  
22  
23

24 <sup>27</sup> Joint Motion to Dismiss, *Uniloc USA, Inc. et al v. Huawei Device USA, Inc. et al*, No. 2:18-cv-  
00074 (E.D. Tex. Jul. 2. 2019), Dkt 58.

25 <sup>28</sup> Order Denying Motion to Dismiss, *Uniloc USA, Inc. et al v. Huawei Device USA, Inc. et al*, No.  
2:18-cv-00074 (E.D. Tex. Jul. 9. 2019), Dkt 59.

26 <sup>29</sup> *Apple Inc. v. Uniloc 2017 LLC*, No. IPR2019-00251, Paper No. 7 (PTAB July 22, 2019).

27 <sup>30</sup> *Apple Inc. v. Uniloc 2017 LLC*, No. IPR2019-00251, Paper No. 22 (PTAB July 20, 2020).

28 <sup>31</sup> See *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-00252, Paper No. 28 (PTAB May 19, 2020); *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-00222, Paper No. 28 (PTAB May 19, 2020).

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1 patent<sup>32</sup> are unpatentable and that three of the four challenged claims of the '106 patent<sup>33</sup> are  
 2 unpatentable, and it has instituted *inter partes* review of the challenged claim of the '252 patent.<sup>34</sup>

3 94. The Uniloc Defendants have also asserted claims without regard to the merits of  
 4 their infringement allegations. For example, in *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00470  
 5 (E.D. Tex.), subsequently transferred as 4:18-cv-00362 (N.D. Cal.) (PJH), Uniloc USA and Uniloc  
 6 Luxembourg asserted that Apple's iPhones, iPads, and Watches infringe U.S. Patent No. 7,690,556  
 7 (the "'556 patent"). The '556 patent claims a "step counter system," which comprises "an  
 8 accelerometer to detect motion of a user, a step calculation logic to utilize the motion detected by  
 9 the accelerometer to detect and count steps, and an incline logic to calculate an incline of a surface  
 10 on which the user moved." The complaint accused Apple's products "that incorporate hardware  
 11 (such as an accelerometer, inclinometer, altimeter and/or barometer) and software (such as the  
 12 Health app in iOS 8.0.x, iOS 9.0.x, iOS 10.0.x and watchOS versions) that are capable of  
 13 calculating the number of steps taken (*e.g.*, 'Steps') and distance covered (*e.g.*, 'Walking +  
 14 Running Distance') by a user as well as the user's change in elevation (*e.g.*, 'Flights Climbed')." But Apple's products do not use an accelerometer to determine elevation change or incline.  
 15 Indeed, an analysis of the '556 patent commissioned by its former owner, Fullpower Technologies,  
 16 Inc. (Fullpower), observed that accelerometers in current fitness trackers, including those in Apple  
 17 products, "do not monitor how much the foot is going up and how much is coming down," as  
 18 required by the claims. Instead, as the Fullpower analysis noted, the incline measurements in the  
 19 tracking devices "com[e] from the barometer/altimeter instead of the accelerometer."<sup>35</sup> Apple  
 20 obtained this analysis through third-party discovery from Fullpower. Uniloc USA and Uniloc  
 21

22  
 23 <sup>32</sup> See *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-00510, Paper No. 21 (PTAB July 22, 2020). Apple  
 24 withdrew its challenge to claim 18 of the '079 patent after PTAB instituted *inter partes* review.  
 See *id.* at 2.

25 <sup>33</sup> See *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-00219, Paper No. 24 (PTAB Apr. 13, 2020). In  
 26 response to a separate petition from Apple to review claims 15, 17, and 18 of the '106 patent—  
 claims that the PTAB found unpatentable in IPR2019-00219 based on different unpatentability  
 grounds—the PTAB denied instituting *inter partes* review. See *Apple Inc. v. Uniloc 2017 LLC*,  
 IPR2019-00220, Paper No. 10 (PTAB May 9, 2019).

27 <sup>34</sup> See *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-01667, Paper No. 7 (PTAB Apr. 21, 2020).

28 <sup>35</sup> *Uniloc USA, Inc. v. Apple Inc.*, 4:18-cv-00362 (N.D. Cal. Mar. 14, 2018) (PJH), Dkt. 120-2.

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Luxembourg refused to reveal to Apple whether it knew of the analysis performed for Fullpower before filing suit. Uniloc USA and Uniloc Luxembourg either ignored this information or was willfully blind to it before bringing a meritless case against Apple.

95. Beyond the '556 patent being not infringed, nearly every claim was found invalid as indefinite in Uniloc USA, Uniloc Luxembourg's case against Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. ("Samsung").<sup>36</sup> The Uniloc Defendants litigated the case against Samsung all the way until the days leading up trial, when it voluntarily dismissed the case.

96. Notwithstanding the weakness of its claim on the '556 patent, Uniloc USA and Uniloc Luxembourg have disclosed that they believe they are entitled to damages of between \$1.41 and \$2.75 per Apple product, for total damages in the range of \$375 to \$732 million. The apparent precision of the per-unit damages request is a facade; Uniloc USA and Uniloc Luxembourg simply adopted the amounts that Apple sought from Samsung in litigation for Apple's patents. Uniloc USA and Uniloc Luxembourg have adopted this approach to damages in multiple cases against Apple in complete disregard for the technology claimed in the asserted patents. In another three cases filed by the Uniloc Defendants, they allege they are entitled to damages of \$2 per Apple product. Based on these demands, the Uniloc Defendants have suggested that they are entitled to between \$4.3 and \$6.8 billion in damages from just seven of its 25 cases against Apple:

Case	Patent	Per Unit Damages	Damages
<i>Uniloc USA, Inc. v. Apple Inc.</i> , No. 5:18-cv-00357 (N.D. Cal.) (LHK)	8,239,852: "Remote Update of Computers Based on Physical Device Recognition"	\$1.41 - \$2.75	\$756,709,869 - \$1,475,852,582
	9,414,199: "Predictive Delivery of Information Based on Device History"	\$1.41 - \$2.75	\$186,200,370 - \$363,156,750

<sup>36</sup> Claim Construction Memorandum & Order, *Uniloc USA, Inc., v. Samsung Elecs. America, Inc.*, No. 2:17-cv-651 (E.D. Tex. Oct. 24, 2018), Dkt. 77. The complaint was originally filed by Uniloc USA and Uniloc Luxembourg and Uniloc 2017 later joined.

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Case	Patent	Per Unit Damages	Damages
<i>Uniloc USA, Inc. v. Apple Inc.</i> , No. 4:18-cv-00361 (N.D. Cal.) (PJH)	8,872,646: “Method and System for Waking Up a Device Due to Motion”	\$1.41 - \$2.75	\$166,933,405 - \$325,579,336
<i>Uniloc USA, Inc. v. Apple Inc.</i> , No. 4:18-cv-00362 (N.D. Cal.) (PJH)	7,690,556: “Step Counter Accounting for Incline”	\$1.41 - \$2.75	\$375,273,911 - \$731,917,202
<i>Uniloc USA, Inc. v. Apple Inc.</i> , No. 4:18-cv-00364 (N.D. Cal.) (PJH)	7,653,508: “Human Activity Monitoring Device”	\$1.41 - \$2.75	\$375,273,911 - \$731,917,202
	7,881,902: “Human Activity Monitoring Device”	\$1.41 - \$2.75	\$375,273,911 - \$731,917,202
	8,712,723: “Human Activity Monitoring Device”	\$1.41 - \$2.75	\$375,273,911 - \$731,917,202
<i>Uniloc USA, Inc. et al. v. Apple Inc.</i> , 5:19-cv-01692 (N.D. Cal.) (EJD)	7,587,207: “Data Delivery through Beacons”	\$2.00	\$1,100,000,000
<i>Uniloc 2017 LLC v. Apple Inc.</i> , 3:19-cv-01904 (N.D. Cal.) (WHO)	7,136,999: “Method and System for Electronic Device Authentication”	\$2.00	\$162,240,692 <sup>37</sup>
<i>Uniloc 2017 LLC v. Apple Inc.</i> , 5:19-cv-01929 (N.D. Cal.) (EJD)	7,020,252: “Group Audio Message Board”	\$2.00	\$489,607,520
<b>Total</b>	<b>\$4,362,787,500 - \$6,844,105,688</b>		

97. Information to evaluate these damages demands, as well as even basic information like how many patents Uniloc has acquired, has been kept obscured. The Federal Circuit remarked as much on July 9, 2020, when it found that sealing requests filed by Uniloc were “grossly excessive” and Uniloc’s “flouting of Local Rule 79-5 particularly flagrant.”<sup>38</sup> Another court

<sup>37</sup> On April 28, 2020, Uniloc 2017 submitted Corrected Supplemental Damages Contentions, in which it moved the date on which the claimed damages began to accrue approximately six years earlier and eliminated the total damages figure based on the incorrect date. As a result, the \$162,240,692 total likely understates Uniloc 2017’s damages figure for infringement of the ’999 patent.

<sup>38</sup> *Uniloc 2017 LLC v. Apple Inc.*, No. 19-1922, at 13 (Fed. Cir. July 9, 2020).

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recently found good cause to unseal information originally redacted by Uniloc regarding the number of patents transferred from prior owners.<sup>39</sup> Uniloc has even gone so far as to obscure the specific patents it owns. For example, it recorded a version of a patent assignment agreement with the US Patent & Trademark Office that, compared to produced versions of the exact same agreement, omit a specific patent later asserted against Apple—specifically, obscuring ownership of U.S. Patent No. 8,872,646 and its foreign counterparts.

Application Number	Patent Number	Country	Title
09/590,859	7197144	US	METHOD AND APPARATUS TO AUTHENTICATE A USER'S SYSTEM TO PREVENT UNAUTHORIZED USE OF SOFTWARE PRODUCTS DISTRIBUTED TO USERS
11/644455	7653508	US	HUMAN ACTIVITY MONITORING DEVICE
11/698633	7690556	US	STEP COUNTER ACCOUNTING FOR INCLINE
12/694135	7881902	US	HUMAN ACTIVITY MONITORING DEVICE
13/018321	8712723	US	HUMAN ACTIVITY MONITORING DEVICE
12/247950	8872646	US	METHOD AND SYSTEM FOR WAKING UP A DEVICE DUE TO MOTION
09/727727	7092671	US	METHOD AND SYSTEM FOR WIRELESSLY AUTODIALING A TELEPHONE NUMBER FROM A RECORD STORED ON A PERSONAL INFORMATION DEVICE
10/712451	7330013	US	APPARATUS AND METHOD FOR CHARGING AND DISCHARGING A BATTERY
08/430943	6580422	US	REMOTE COMPUTER DISPLAY USING GRAPHICS PRIMITIVES SENT OVER A WIRELESS LINK
10/011140	6661203	US	BATTERY CHARGING AND DISCHARGING SYSTEM OPTIMIZED FOR HIGH TEMPERATURE ENVIRONMENTS
09/181431	6161134	US	METHOD, APPARATUS AND COMMUNICATIONS SYSTEM FOR COMPANION INFORMATION AND NETWORK APPLIANCES
09/451388	6446127	US	SYSTEM AND METHOD FOR PROVIDING USER MOBILITY SERVICES ON A TELEPHONY NETWORK
09/237609	6216158	US	SYSTEM AND METHOD USING A PALM SIZED COMPUTER TO CONTROL NETWORK DEVICES
09/558413	6622018	US	PORTABLE DEVICE CONTROL CONSOLE WITH WIRELESS CONNECTION
09/246606	6363053	US	METHOD AND APPARATUS FOR MEASUREMENT-BASED CONFORMANCE TESTING OF SERVICE LEVEL AGREEMENTS IN NETWORKS
10/671375	8539552	US	SYSTEM AND METHOD FOR NETWORK BASED POLICY ENFORCEMENT OF INTELLIGENT-CLIENT FEATURES
09/303832	6731642	US	
10/834418	7573873	US	INTERNET TELEPHONY USING NETWORK ADDRESS TRANSLATION
09/728833	6856616	US	SYSTEM AND METHOD FOR PROVIDING SERVICE PROVIDER CONFIGURATIONS FOR TELEPHONES USING A CENTRAL SERVER IN A DATA NETWORK TELEPHONY SYSTEM
10/259542	7240200	US	SYSTEM AND METHOD FOR GUARANTEEING SOFTWARE INTEGRITY VIA COMBINED HARDWARE AND SOFTWARE AUTHENTICATION

Exhibit A-2

UNILOC\_APPLE\_2017\_16306

Application Number	Patent Number	Country	Title
09/590,859	7197144	US	METHOD AND APPARATUS TO AUTHENTICATE A USER'S SYSTEM TO PREVENT UNAUTHORIZED USE OF SOFTWARE PRODUCTS DISTRIBUTED TO USERS
11/644455	7653508	US	HUMAN ACTIVITY MONITORING DEVICE
11/698633	7690556	US	STEP COUNTER ACCOUNTING FOR INCLINE
12/694135	7881902	US	HUMAN ACTIVITY MONITORING DEVICE
13/018321	8712723	US	HUMAN ACTIVITY MONITORING DEVICE
09/727727	7092671	US	METHOD AND SYSTEM FOR WIRELESSLY AUTODIALING A TELEPHONE NUMBER FROM A RECORD STORED ON A PERSONAL INFORMATION DEVICE
10/712451	7330013	US	APPARATUS AND METHOD FOR CHARGING AND DISCHARGING A BATTERY
08/430943	6580422	US	REMOTE COMPUTER DISPLAY USING GRAPHICS PRIMITIVES SENT OVER A WIRELESS LINK
10/011140	6661203	US	BATTERY CHARGING AND DISCHARGING SYSTEM OPTIMIZED FOR HIGH TEMPERATURE ENVIRONMENTS
09/181431	6161134	US	METHOD, APPARATUS AND COMMUNICATIONS SYSTEM FOR COMPANION INFORMATION AND NETWORK APPLIANCES
09/451388	6446127	US	SYSTEM AND METHOD FOR PROVIDING USER MOBILITY SERVICES ON A TELEPHONY NETWORK
09/237609	6216158	US	SYSTEM AND METHOD USING A PALM SIZED COMPUTER TO CONTROL NETWORK DEVICES
09/558413	6622018	US	PORTABLE DEVICE CONTROL CONSOLE WITH WIRELESS CONNECTION
09/246606	6363053	US	METHOD AND APPARATUS FOR MEASUREMENT-BASED CONFORMANCE TESTING OF SERVICE LEVEL AGREEMENTS IN NETWORKS
10/671375	8539552	US	SYSTEM AND METHOD FOR NETWORK BASED POLICY ENFORCEMENT OF INTELLIGENT-CLIENT FEATURES
09/303832	6731642	US	
10/834418	7573873	US	INTERNET TELEPHONY USING NETWORK ADDRESS TRANSLATION
09/728833	6856616	US	SYSTEM AND METHOD FOR PROVIDING SERVICE PROVIDER CONFIGURATIONS FOR TELEPHONES USING A CENTRAL SERVER IN A DATA NETWORK TELEPHONY SYSTEM
10/259542	7240200	US	SYSTEM AND METHOD FOR GUARANTEEING SOFTWARE INTEGRITY VIA COMBINED HARDWARE AND SOFTWARE AUTHENTICATION

Exhibit A-2

PATENT  
REEL: 046532 FRAME: 0112

Disclosures also have inconsistently listed the corporate relationships amongst the entities, including listing Uniloc USA, Inc. as “wholly owned by Uniloc USA Holdings LLC” in this case (Dkt. 176) (June 10, 2020), while elsewhere listing in other operative pleadings Uniloc USA, Inc.’s parent as Uniloc Corporation Pty Ltd.<sup>40</sup>

98. As the number of times that the Uniloc Defendants’ cases against Apple have been transferred out of Texas—shown in the list above in paragraph 83—makes clear, the Uniloc

<sup>39</sup> *Uniloc USA, Inc. v. Apple Inc.*, No. 5:19-cv-01692-EJD, Dkt. 142 (N.D. Cal. July 31, 2020).

<sup>40</sup> No. 19-1922, Dkt. 4 (Fed. Cir. June 7, 2019).

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Defendants have time and again sought to impose the additional burden on Apple of litigating in an inconvenient forum. Uniloc Defendants have gone so far as to misrepresent facts about its connections to Texas and lack of connections to California in an effort to fend off Apple's requests to have cases transferred to this District. In *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex.), the court detailed a series of deceptive statements made by Uniloc USA and Uniloc Luxembourg, concluding that such "contradictory representations [are] troubling, particularly because they are not isolated exceptions." For example, Uniloc USA and Uniloc Luxembourg made repeated misrepresentations about their lack of connection to California<sup>41</sup>:

Mr. Burdick, Uniloc's only party witness residing within the Eastern District of Texas, does not spend the majority of his time in the Plano office. (Dkt. No. 60-2, Ex. B at 2.) Mr. Burdick spends equally as much time in Plano, as he does in Boise, Idaho and in southern California. (*Id.*) In addition, Mr. Etchegoyen [the CEO of Uniloc Luxembourg] spends about twenty percent of his time in either Newport Beach or Irvine, California and owns a residence in Newport Beach, which he uses when he "is doing business in Orange County." (*Id.*; Dkt. No. 60-1, Ex. A at 160:15–16.) Both Mr. Burdick and Mr. Etchegoyen have held around one hundred "top-level strategy meetings" in southern California, for Uniloc business purposes. (Dkt. No. 60-1, Ex. A at 54:2–55:11.) Mr. Etchegoyen separately travels to southern California every month to meet with Mr. Turner, Uniloc Luxembourg S.A.'s CFO. (Dkt. No. 60-1, Ex. A at 47:18–25.) All of these facts fly in the face of Uniloc's prior representations: that Uniloc had only one full-time employee, Tanya Kiatkulpiboone, working at its office in Irvine, California as of April 2017 (Dkt. No. 30-7, Burdick Decl. ¶ 10); that Mr. Etchegoyen has lived in Hawaii since well before the filing date of the Complaint and does not maintain a residence in California (Dkt. No. 30 at 12); and that Mr. Burdick does not work in California (Dkt. No. 43 at 2 n.3 [(l)"Apple also repeats its erroneous assertion that Uniloc's IP counsel lives and works in California."); and that Apple "attempts to exaggerate Uniloc's ties to California" (Dkt. No. 30 at 1–2).

99. As non-practicing entities, the Uniloc Defendants cannot credibly seek injunctions in U.S. litigation under the Supreme Court's decision in *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006), but they do not face the same limitations in Europe where injunctions may be automatically granted if infringement is found. Accordingly, Uniloc Luxembourg has sought to

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<sup>41</sup> Memorandum Order and Opinion at 16-17, *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex. Dec. 22, 2017).



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1 enjoin Apple in litigation in Germany as leverage to coerce Apple to accept unreasonable licensing  
2 terms—including for its U.S. patents—or face the risk of having its business shut down. In Uniloc  
3 Luxembourg’s first case to proceed to trial against Apple, in Germany, it was Fortress employees  
4 who attended and consulted during the trial with outside counsel for Uniloc Luxembourg. As with  
5 the rest of its cases against Apple to date, the court found the allegation meritless, here based on  
6 Apple not infringing the patent, and dismissed the case (a decision that Uniloc Luxembourg has  
7 appealed).

**B. VLSI**

8  
9 100. On October 2, 2017, VLSI filed a suit against Intel in the Northern District of  
10 California, asserting eight patents against virtually every one of Intel’s microprocessors ever sold  
11 since 2011 (the “VLSI California Action”).<sup>42</sup> Despite VLSI’s aggressive litigation strategy in that  
12 case, it suffered numerous setbacks, including losing various discovery- and damages-related  
13 disputes. After the PTAB instituted *inter partes* review proceedings to evaluate the patentability  
14 of the claims in six of the asserted patents, the parties stipulated to a stay of the Northern District  
15 of California case in March 2019.

16 101. Apparently unhappy with the setbacks it was encountering in the Northern District  
17 of California, VLSI also set its sights on Delaware. On June 28, 2018, VLSI filed suit in the  
18 District of Delaware asserting five different patents against many of the same products accused in  
19 the VLSI California Action (the “VLSI Delaware Action”).<sup>43</sup> Since its filing, the VLSI Delaware  
20 Action has imposed substantial burdens on Intel: the parties have engaged in extensive discovery,  
21 with Intel having produced over a million pages of documents related to the accused products and  
22 2.5 TB of source code, and thousands of pages of noninfringement and invalidity contentions.

23 102. On March 1, 2019—*the same day* that VLSI agreed to stay the VLSI California  
24 Action—VLSI filed yet another suit in the District of Delaware, asserting six new patents against  
25  
26

27 <sup>42</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 5:17-cv-05671 (N.D. Cal. Oct. 2, 2017) (BLF).

28 <sup>43</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 1:18-cv-00966 (D. Del. June 20, 2018).



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1 many of the same products at issue in the previous cases.<sup>44</sup>

2 103. Evidently concerned that the VLSI Delaware Action and second suit in Delaware  
3 might be consolidated, VLSI again abandoned its litigation in hopes of obtaining a favorable  
4 outcome elsewhere. On April 11, 2019, just hours after Intel filed its reply brief in support of its  
5 motion to consolidate—and without any warning—VLSI voluntarily dismissed the second suit in  
6 Delaware and, *that same day*, filed three suits in the Western District of Texas (the “VLSI Texas  
7 Actions”),<sup>45</sup> asserting the same six patents at issue in second Delaware suit, as well as two  
8 additional patents.

9 104. VLSI claims up to \$7.1 billion in connection with eight patents in the VLSI  
10 California Action and multiple billions of dollars in damages in the VLSI Delaware Action. These  
11 inflated numbers are a product of transferring the patents to VLSI and employing them in  
12 Fortress’s unlawful aggregation scheme, including the fact that VLSI does not invent, produce, or  
13 sell any products. For example, before VLSI acquired certain of the patents asserted against Intel  
14 in the Delaware I Action, [REDACTED]

15 [REDACTED]  
16 [REDACTED]

17 105. VLSI, at Fortress’s direction, can and does take advantage of the fact that it  
18 produces nothing at all and therefore has no desire or need for dispute resolution. Because VLSI’s  
19 litigation costs and risks are trivial in comparison with those of the product companies it sues, it  
20 can afford to bring these types of serial suits based on weak or low-value patents under the theory  
21 that even a modest settlement for supracompetitive royalties will be profitable.

22 106. As a non-practicing entity, VLSI cannot credibly seek injunctions in U.S. litigation  
23 under the Supreme Court’s decision in *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388  
24 (2006). Faced with this problem, VLSI is seeking to enjoin Intel in multiple litigations in China,  
25

26 <sup>44</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 1:19-cv-00426 (D. Del. Mar. 1, 2019).

27 <sup>45</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 6:19-cv-00254 (W.D. Tex. Apr. 11, 2019); *VLSI Tech. LLC*  
28 *v. Intel Corp.*, No. 6:19-cv-00255 (W.D. Tex. Apr. 11, 2019); *VLSI Tech. LLC v. Intel Corp.*, No.  
6:19-cv-00256 (W.D. Tex. Apr. 11, 2019).

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1 as leverage to coerce Intel to accept unreasonable licensing terms—including for its U.S. patents—  
2 or face the risk of having its business shut down.

3 **C. INVT**

4 107. [REDACTED]  
5 [REDACTED]  
6 [REDACTED]

7 Following that offer, Apple  
8 and Inventergy engaged in licensing negotiations.

9 108. INVT sued Apple and HTC in May 2017 in the District of New Jersey. INVT has  
10 asserted eight SEPs that it claims are essential to cellular standards and are subject to FRAND  
11 commitments. On August 29, 2017, INVT filed suit against ZTE Corporation (“ZTE”), in which  
12 it has asserted the same eight patents.

13 109. [REDACTED]  
14 [REDACTED]  
15 [REDACTED]

16 Apple nonetheless informed INVT in July 2018 that it remained willing to negotiate and  
17 asked INVT to identify the specific patents it was seeking to license.

18 110. Before responding to Apple’s request and apparently dissatisfied with the pressure  
19 it could exert through district court litigation alone, on September 14, 2018, INVT asserted five of  
20 the patents from the District of New Jersey action against Apple, HTC, and ZTE in the  
21 International Trade Commission seeking an order excluding the accused products from  
22 importation into the United States.

23 111. The International Trade Commission delegated to the Administrative Law Judge  
24 overseeing the litigation the responsibility to assess the implications for the public interest of INVT  
25 seeking an exclusion order on FRAND-committed patents. An evidentiary hearing in the case was  
26 held in September 2019. In the February 2020 Initial Determination, the Administrative Law  
27 Judge found that: “INVT failed to prove that claim 4 of the [7,206,587] patent and claims 3 and 4  
28 of the [6,760,590] patent are essential to the 3G and LTE standards” and that “INVT failed to

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1 prove that independent claim 1 of the [7,848,439] patent is essential to the LTE standard.”<sup>46</sup> The  
2 Commission upheld this decision.

**D. IXI IP**

4 112. IXI R&D and IXI IP (collectively, “IXI”) brought suit, in the Southern District of  
5 New York, against Samsung and BlackBerry Limited and BlackBerry Corporation (“BlackBerry”)  
6 on June 17, 2014 and June 18, 2014 respectively, on the same set of four patents in each case. IXI  
7 voluntarily dismissed without prejudice their complaint against BlackBerry on February 5, 2019.

8 113. IXI also sued Apple on the same patents on October 2, 2014 in the Southern District  
9 of New York. On May 11, 2015, IXI and Apple jointly stipulated to dismiss with prejudice one  
10 of the patent claims at issue in the case.

11 114. On December 21, 2016, the PTAB found unpatentable every asserted claim of one  
12 of the remaining patents-in-suit in *inter partes* review proceedings.<sup>47</sup> While the PTAB’s decision  
13 was on appeal, IXI filed an *ex parte* reexamination of the patent. The patent issued from  
14 reexamination with one amended claim and 68 new claims. U.S. Patent No. 7,039,033 (requested  
15 Mar. 24, 2017) (issued Feb. 1, 2018). IXI obtained the reexamined claims by adding trivial  
16 additional limitations—like a “speaker,” a “microphone,” and a “touchscreen”—that make the new  
17 claims no more novel than the canceled claims. Due to the triviality of their additional limitations,  
18 the reexamined claims are currently under review in a second reexamination proceeding. On July  
19 29, 2020, the USPTO issued an action in the second reexamination proceeding rejecting all 68  
20 claims as invalid on numerous prior art grounds.<sup>48</sup>

21 115. Similarly, on December 21, 2016, the PTAB found unpatentable all but one of the  
22 asserted claims of another asserted patent, U.S. Patent No. 7,295,532 (the “’532 patent”).<sup>49</sup> The  
23 USPTO thereafter instituted a reexamination of the ’532 patent challenging, among other claims,  
24

25  
26 <sup>46</sup> *In the Matter of Certain LTE- and 3G-Complaint Cellular Communications Devices*, Inv. No. 337-TA-1138, Paper No. 63 (ITC Feb. 18, 2020) (capital letters removed).

27 <sup>47</sup> *See Samsung Elecs. v. IXI IP, LLC*, IPR2015-01444, Paper No. 27 (PTAB Dec. 21, 2016).

28 <sup>48</sup> Office Action (mailed July 27, 2020).

<sup>49</sup> *See Samsung Elecs. v. IXI IP, LLC*, IPR2015-01443, Paper No. 27 (PTAB Dec. 21, 2016).

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the sole originally-asserted claim that was not instituted as part of the *inter partes* review. In the subsequent *ex parte* reexamination proceedings, all challenged claims, including the lone remaining originally-asserted claim, were rejected.<sup>50</sup> In response, IXI sought to add numerous new claims and argue for patentability of the challenged claims. IXI eventually disclaimed its originally-asserted claim, and the patent issued from reexamination with one amended claim and fifteen new claims. U.S. Patent No. 7,295,532 (requested Apr. 3, 2018) (issued Jun. 17, 2020).

116. In 2019, IXI subsequently moved to amend its infringement contentions in the litigation against Apple to assert certain unspecified newly-issued claims of the '033 patent and additional unspecified claims of the '532 patent that had not yet even been allowed by the USPTO.<sup>51</sup> IXI thereby sought to restart the litigation that it comprehensively lost five years after the complaint was filed. Apple opposed IXI's motion, arguing that IXI's attempt to insert reexamined claims into the litigation should be barred by res judicata.<sup>52</sup> The court denied IXI's motion to amend its infringement contentions, but it did not decide whether res judicata bars IXI from asserting its reexamined claims against Apple. Apple and Samsung subsequently filed complaints seeking a declaratory judgment that res judicata bars IXI from asserting the reexamined claims and, in the alternative, that the reexamined claims are not infringed and are invalid.

117. Apple also filed *inter partes* review petitions on the reexamined claims of the '033 patent in 2018, but the PTAB denied institution because—even though the new claims did not exist during the year after the complaint was filed—the PTAB concluded that the petitions were time-barred.<sup>53</sup> IXI thus attempts to immunize its patent from *inter partes* review challenge.

#### **E. Seven Networks**

118. In May 2017, Seven Networks sued ZTE and Samsung in the Eastern District of Texas on the same set of seven patents in both cases and also asserted those patents plus three

<sup>50</sup> Office Action (mailed Sept. 25, 2018).

<sup>51</sup> *IXI Mobile (R&D) Ltd. v. Apple Inc.*, No. 4:15-cv-3755 (N.D. Cal. Mar. 7, 2019) (HSG), Dkt. 157.

<sup>52</sup> *Id.* Dkt. 164.

<sup>53</sup> *Apple Inc., v. IXI IP, LLC*, IPR2019-00124, Paper No. 13 (PTAB Jun. 3, 2019).

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1 others against Google. Seven Networks voluntarily dismissed its case against ZTE a month later  
2 before refiling the same patents. In November 2018, Seven Networks asserted another group of  
3 six patents against Samsung and Google.

4 119. Seven Networks eventually obtained settlements with ZTE, Samsung, and  
5 Google.<sup>54</sup>

6 120. Seven Networks sued Apple on April 10, 2019 in the Eastern District of Texas,  
7 asserting sixteen patents against Apple related to a wide range of Apple products and services. Per  
8 the complaint, Seven Networks is listed as the “assignee of all rights, title, and interest in” for each  
9 of the sixteen patents-in-suit.

10 **F. KIP CR P1**

11 121. Since receiving a loan from Fortress Credit in 2013, Crossroads has asserted eight  
12 separate patent actions in the Western District of Texas against Dot Hill Systems Corp.; Oracle  
13 Corporation; Huawei Technologies Co., Ltd.; Huawei Enterprise USA, Inc.; Huawei Technologies  
14 USA, Inc.; Cisco Systems, Inc.; NetApp, Inc.; and Quantum Corporation claiming infringement  
15 of some combination of U.S. Patent Nos. 6,425,035 (the “’035 patent”), 7,051,147 (the “’147  
16 patent”), 7,934,041 (the “’041 patent”), and 7,987,311 (the “’311 patent”). Specifically,  
17 Crossroads alleged in each of the eight actions that the ’035 patent was infringed, and in seven of  
18 the actions that the ’041 patent was infringed.

19 122. In Final Written Decisions dated January 29, 2016 and March 17, 2016, the PTAB  
20 found in *inter partes* review proceedings all asserted claims of the asserted ’035 and ’041 patents  
21 were invalid. The U.S. Court of Appeals for the Federal Circuit affirmed that decision on June 6,  
22 2017.

23 123. Fortress and KIP CR P1 agreed to step into the place of Crossroads in these  
24 litigations notwithstanding the PTAB and Federal Circuit findings. Fortress’s subsequent writs of  
25

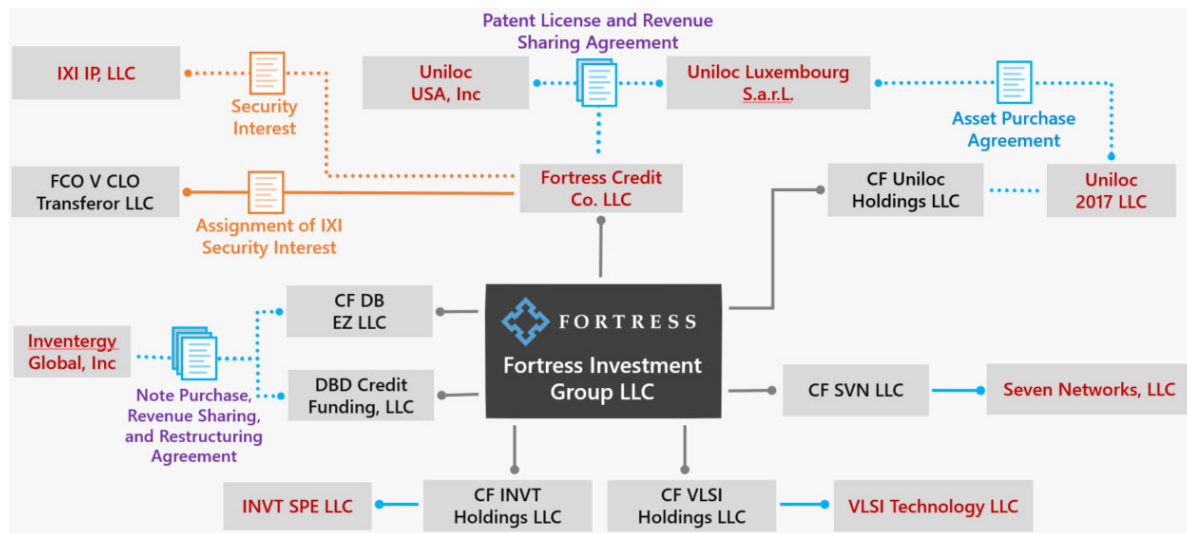
26 <sup>54</sup> *Seven Networks, LLC v. ZTE (USA) Inc.*, No. 3:17-cv-1495 (N.D. Tex. Aug. 14, 2019), Dkt.  
27 318; *Seven Networks, LLC v. Samsung Elecs. Co., Ltd.*, No. 2:17-cv-441 (E.D. Tex. Dec. 28, 2018),  
28 Dkt. 67; *Seven Networks, LLC v. Google LLC*, No. 2:17-cv-442 (E.D. Tex. Jan. 20, 2019), Dkt.  
608.

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certiorari to the Supreme Court challenging the constitutionality of the PTAB's *inter partes* review process were denied on April 30, 2018. Each of these actions was ultimately dismissed.

### III. SPECIFIC EXAMPLES OF ELIMINATION OF COMPETITION ENABLING EXTRACTION OF SUPRACOMPETITIVE ROYALTIES

124. Fortress obfuscates the patent aggregation scheme that it accomplishes in concert with Defendant PAEs by using a web of entities to assemble and assert substitute and complementary patents in certain technological areas. That structure hides the full extent of the patent aggregation carried out by Fortress and Defendant PAEs and accentuates the anticompetitive effects of Fortress's patent aggregation scheme. The following chart shows the relationships between Fortress, Defendant PAEs, and other Fortress-controlled entities that Fortress employs to increase its market power:



125. Despite Defendants' obfuscation and prior to discovery, Apple and Intel have determined that, through the agreements between Fortress and the various PAE Defendants and patent transactions discussed above, Defendants have aggregated under Fortress's control at least the substitute patents in certain technology areas relevant to electronic devices and components or software therein and processes used to manufacture them discussed below. Defendants have then taken advantage of the market power or enhanced market power they have obtained from eliminating competition to extract supracompetitive royalties from many target product suppliers.

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126. To be clear, the specific markets discussed below are defined by the function that competing technologies contained therein perform, not by the particular type of device in which that function is incorporated.<sup>55</sup>

**A. Network-based Voice Messaging**

127. As one example, Fortress, the Uniloc Defendants, Seven Networks, and INVT have aggregated patents relating to network-based voice messaging. Network-based voice messaging allows for multiple recipients to access the same voice message. This is a common feature that many electronic devices, such as smartphones, incorporate, and there is no close substitute for the functionality.

128. Defendants have aggregated patents in an antitrust market for patents purporting to cover network-based voice messaging capabilities, the “Network-based Voice Messaging Patents Market.”<sup>56</sup> The Network-based Voice Messaging Patents Market constitutes a relevant antitrust market where Fortress (either directly through its PAE subsidiaries or by acting in concert with the PAEs in which it invests) and other holders of patents claimed to read on electronic devices that support network-based voice messaging compete with one another to license patents to suppliers of such devices and supporting software.

129. Among the substitute patents Defendants have aggregated in the Network-based Voice Messaging Patents Market are U.S. Patent No. 7,020,252, U.S. Patent No. 7,535,890, U.S. Patent No. 8,243,723, U.S. Patent No. 8,724,622, U.S. Patent No. 8,995,433, and U.S. Patent No. 7,920,579, all of which purport to cover alternative techniques to enable multiple recipients to access a voice message.

130. U.S. Patent No. 7,020,252 (“the ’252 patent”) is titled “Group Audio Message

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<sup>55</sup> The substitute and complementary patents aggregated pursuant to Defendants’ anticompetitive scheme relate to high-tech electronics devices and components. To the extent the patents discussed herein have implications for products like home appliances, it is because such products incorporate high-tech electronics components that, for instance, enable a refrigerator to connect to the Internet for purposes of monitoring and controlling the device.

<sup>56</sup> The Network-based Voice Messaging Patents Market and other antitrust markets defined in Section III are collectively referred to as “Relevant Patent Markets.” The geographic scope of each of the Relevant Patents Markets is the United States, as patents are national in scope.



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Board” and issued on March 28, 2006. According to its abstract, the ’252 patent relates to “[a] communications system . . . comprising a communal audio message recordal apparatus GAMB [] with multiple users [] enabled to record and access recorded messages.” Its claims are directed to a community messaging system (e.g., voice chat rooms with recorded messages accessible to multiple people).

131. On its face, the ’252 patent is assigned to Koninklijke Philips Electronics N.V. (“Philips”). On January 30, 2009, Philips assigned the ’252 patent to IPG Electronics 503 Limited (“IPG Electronics 503”). On April 10, 2012, IPG Electronics 503 assigned the ’252 patent to Pendragon Wireless LLC (“Pendragon Wireless”). On January 31, 2018, Pendragon Wireless assigned the ’252 patent to Defendant Uniloc Luxembourg. Less than five months later, on May 3, 2018, Defendant Uniloc Luxembourg assigned the ’252 patent to Defendant Uniloc 2017.

132. U.S. Patent No. 7,535,890 (“the ’5890 patent”) is titled “System and Method for Instant VoIP Messaging” and issued on May 19, 2009. According to its abstract, the ’5890 patent relates to “an instant voice messaging system (and method) for delivering instant messages over a packet-switched network.” Its claims are directed to instant voice messaging, where the voice messages are available to multiple recipients.

133. On its face, the ’5890 patent is assigned to Ayalogic, Inc. (“Ayalogic”). On July 16, 2013, Ayalogic assigned the ’5890 patent to Empire IP LLC (“Empire IP”). On June 10, 2016, Empire IP assigned the ’5890 patent to Defendant Uniloc Luxembourg, and the patent was thereby made subject to a December 30, 2014 security interest Defendant Uniloc Luxembourg and Defendant Uniloc USA had conveyed to Defendant Fortress Credit. On May 3, 2018, the same day it assigned the ’252 patent to Defendant Uniloc 2017, Defendant Uniloc Luxembourg also assigned the ’5890 patent to Defendant Uniloc 2017.

134. U.S. Patent No. 8,243,723 (“the ’723 patent”), U.S. Patent No. 8,724,622 (“the ’622 patent”), and U.S. Patent No. 8,995,433 (“the ’433 patent”) are in the same patent family as the ’5890 patent, are all titled “System and Method for Instant VoIP Messaging,” and issued on August 14, 2012, May 13, 2014, and March 31, 2015, respectively. As with the ’5890 patent, the ’723

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1 patent, the '622 patent, and the '433 patent relate to instant voice messaging over a packet-switched  
2 network. More specifically, they are directed to instant voice messaging, where the voice  
3 messages are available to multiple recipients.

4 135. As with the '5890 patent, the '723 patent and the application that led to the '622  
5 patent were assigned by Ayalogic to Empire IP in July 2013. Empire IP thereafter filed the  
6 application the led to the '433 patent. Along with the '5890 patent, on June 10, 2016, Empire IP  
7 assigned the '723 patent, the '622 patent, and the '433 patent to Defendant Uniloc Luxembourg,  
8 thereby subjecting each to a December 30, 2014 security interest Defendant Uniloc Luxembourg  
9 and Defendant Uniloc USA had conveyed to Defendant Fortress Credit. And on May 3, 2018,  
10 along with the '5890 patent, Defendant Uniloc Luxembourg assigned the '723 patent, the '622  
11 patent, and the '433 patent to Defendant Uniloc 2017.

12 136. In addition to the patents discussed immediately above, which are substitutes for  
13 one another, Defendants have aggregated additional patents relating to network-based voice  
14 messaging that are complements to, and possibly substitutes for, the '252 patent, the '5890 patent,  
15 the '723 patent, the '622 patent, and the '433 patent.

16 137. U.S. Patent No. 8,838,744 ("the '744 patent") is titled "Web-based Access to Data  
17 Objects" and issued on September 16, 2014. According to its abstract, the '744 patent relates to  
18 "providing a mobile device with web-based access to data objects." Its claims are directed to a  
19 method for retrieving data objects such as sound files from the web using a relay server.

20 138. On its face, the '744 patent is assigned to Seven Networks, Inc. As noted above,  
21 Fortress converted Seven Networks Inc. to Seven Networks LLC in 2015.

22 139. U.S. Patent No. 7,920,579 ("the '579 patent") is titled "Method, System and  
23 Apparatus for Media Gateway to Transmit and Receive Multicast Data" and issued on April 5,  
24 2011. According to its abstract, the '579 patent "provides a method, system and apparatus for [a  
25 media gateway] to transmit and receive multicast data." Its claims are directed to multicasting  
26 techniques that enable shared access to a media stream.

27 140. On its face, the '579 patent is assigned to Huawei. On May 15, 2013, Huawei  
28

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1 assigned the '579 patent to Inventergy, Inc. On October 1, 2014, Inventergy, Inc. assigned a  
2 security interest in the '579 patent to DBD Credit Funding LLC. On December 22, 2016,  
3 Inventergy, Inventergy, Inc., eOn Communication Systems, Inc., Inventergy Holding, LLC,  
4 Inventergy Innovations, LLC, Inventergy IoT, LLC, and Inventergy LBS, LLC assigned a security  
5 interest in the '579 patent to DBD Credit Funding LLC. On April 27, 2017, Inventergy, Inc.  
6 assigned the '579 patent to INVT.

7 141. Defendants' aggregation of patents in the Network-based Voice Messaging Patents  
8 Market (including at least five substitute patents and two complementary and/or substitute patents)  
9 has reduced competition in that market, leading to inflated royalties and decreased licensing  
10 output. For example, the '252 patent and the '5890 patent each purport to cover techniques that  
11 enable multiple recipients to access a shared voice message. Specifically, the '252 describes a  
12 recipient-driven method in which the shared voice message is posted to a communal message  
13 board where recipients can access the message. On the other hand, the '5890 patent describes a  
14 sender-driven method in which the sender selects the recipients and the message is delivered to  
15 the selected recipients. A substitute for posting a voice message to a communal message board  
16 includes delivering a voice message to sender-selected recipients, and vice versa. When the '252  
17 and '5890 patents were owned by different entities, a party wishing to use one of these potential  
18 substitute technologies would be able to take advantage of competition between the owners of  
19 these patents when attempting to secure a license. But because of Defendants' unlawful  
20 aggregation of patents, Defendants now control both substitute technologies, eliminating such  
21 competition.

22 142. That lessening of competition is reflected by the evidence of supracompetitive  
23 royalties sought and received by Defendants. Whereas the prior owners of the '252 patent (Philips)  
24 and the '5890 patent, the '433 patent, the '723 patent, and/or the '622 patent (Ayalogic, then  
25 Empire IP) never asserted these patents because of the competitive constraints they faced,  
26 Defendants have pursued numerous assertions and secured multiple settlements for substantial  
27 royalties.  
28

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1           143. Specifically, Defendants Uniloc Luxembourg and Uniloc USA, both under the  
2 control of Fortress, began a litigation campaign in 2016 based on the '5890 patent, the '433 patent,  
3 the '723 patent, and the '622 patent, shortly after acquiring the patents from Empire IP. From  
4 2016 to 2018, Uniloc Luxembourg and Uniloc USA asserted at least one, but often multiple, of  
5 these patents in 40 lawsuits:

- 6           • *Uniloc USA, Inc. et al. v. Amazon.com, Inc. et al.*, No. 2:18-cv-00289 (E.D. Tex.);
- 7           • *Uniloc USA, Inc. et al. v. Kik Interactive, Inc.*, No. 2:17-cv-00481 (E.D. Tex.);
- 8           • *Uniloc USA, Inc. et al. v. Hike Ltd.*, No. 2:17-cv-00475 (E.D. Tex.);
- 9           • *Uniloc USA, Inc. et al. v. Google Inc.*, No. 2:17-cv-00465 (E.D. Tex.);
- 10          • *Uniloc USA, Inc. et al. v. Google Inc.*, No. 2:17-cv-00466 (E.D. Tex.);
- 11          • *Uniloc USA, Inc. et al. v. Google Inc.*, No. 2:17-cv-00467 (E.D. Tex.);
- 12          • *Uniloc USA, Inc. et al. v. Kik Interactive, Inc.*, No. 2:17-cv-00347 (E.D. Tex.),
- 13          subsequently consolidated as No. 2:17-cv-00346 (E.D. Tex.);
- 14          • *Uniloc USA, Inc. et al. v. Hike Ltd.*, No. 2:17-cv-00349 (E.D. Tex.);
- 15          • *Uniloc USA, Inc. et al. v. Google, LLC*, No. 2:17-cv-00231 (E.D. Tex.);
- 16          • *Uniloc USA, Inc. et al. v. Google Inc.*, No. 2:17-cv-00224 (E.D. Tex.);
- 17          • *Uniloc USA, Inc. et al. v. Google, LLC*, No. 2:17-cv-00214 (E.D. Tex.);
- 18          • *Uniloc USA, Inc. et al. v. HeyWire, Inc.*, No. 2:16-cv-01313 (E.D. Tex.);
- 19          • *Uniloc USA, Inc. et al. v. HTC America, Inc.*, No. 2:16-cv-00989 (E.D. Tex.);
- 20          • *Uniloc USA, Inc. et al. v. Kyocera America, Inc. et al.*, No. 2:16-cv-00990 (E.D. Tex.);
- 21          • *Uniloc USA, Inc. et al. v. LG Electronics USA, Inc.*, No. 2:16-cv-00991 (E.D. Tex.);
- 22          • *Uniloc USA, Inc. et al. v. Motorola Mobility LLC*, No. 2:16-cv-00992 (E.D. Tex.);
- 23          • *Uniloc USA, Inc. et al. v. ZTE (USA) Inc. et al.*, No. 2:16-cv-00993 (E.D. Tex.);
- 24          • *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:16-cv-00994 (E.D. Tex.);
- 25          • *Uniloc USA, Inc. et al. v. Telegram Messenger, LLP*, No. 2:16-cv-00892 (E.D. Tex.);
- 26          • *Uniloc USA, Inc. et al. v. Telegram Messenger, LLP*, No. 2:16-cv-00892 (E.D. Tex.);
- 27          • *Uniloc USA, Inc. et al. v. Telegram Messenger, LLP*, No. 2:16-cv-00892 (E.D. Tex.);
- 28          • *Uniloc USA, Inc. et al. v. Telegram Messenger, LLP*, No. 2:16-cv-00892 (E.D. Tex.);

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- *Uniloc USA, Inc. et al. v. Vonage Holdings Corp. et al.*, No. 2:16-cv-00893 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Avaya Inc.*, No. 2:16-cv-00777 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. ShoreTel, Inc.*, No. 2:16-cv-00779 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. AOL Inc.*, No. 2:16-cv-00722 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. BeeTalk Private Ltd.*, No. 2:16-cv-00725 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Facebook, Inc.*, No. 2:16-cv-00728 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Green Tomato Limited*, No. 2:16-cv-00731 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Sony Interactive Entertainment LLC*, No. 2:16-cv-00732 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. TangoMe, Inc. d/b/a Tango*, No. 2:16-cv-00733 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Tencent America, LLC et al.*, No. 2:16-cv-00694 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Snap Inc.*, No. 2:16-cv-00696 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:16-cv-00638 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. BlackBerry Corporation et al.*, No. 2:16-cv-00639 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Kakao Corporation*, No. 2:16-cv-00640 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Line Euro-Americas Corp. et al.*, No. 2:16-cv-00641 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc.*, No. 2:16-cv-00642 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Viber Media Sarl*, No. 2:16-cv-00643 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. VoxerNet LLC*, No. 2:16-cv-00644 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. WhatsApp, Inc.*, No. 2:16-cv-00645 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Tencent America, LLC et al.*, No. 2:16-cv-00577 (E.D. Tex.); and
- *Uniloc USA, Inc. et al. v. Amazon.com, Inc. et al.*, No. 2:18-cv-00290 (E.D. Tex.).

144. Of the 40 suits based on these patents, at least ten resulted in settlements after nine

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defendants capitulated to Uniloc's demands:

- *Uniloc USA, Inc. et al. v. Hike Ltd.*, No. 2:17-cv-00475 (E.D. Tex.), and *Uniloc USA, Inc. et al. v. Hike Ltd.*, No. 2:17-cv-00349 (E.D. Tex.), were dismissed pursuant to a settlement in April 2019;
- *Uniloc USA, Inc. et al. v. Kyocera America, Inc. et al.*, No. 2:16-cv-00990 (E.D. Tex.), was dismissed pursuant to a settlement in June 2017;
- *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:16-cv-00994 (E.D. Tex.), was dismissed pursuant to a settlement in July 2019;
- *Uniloc USA, Inc. et al. v. AOL Inc.*, No. 2:16-cv-00722 (E.D. Tex.), was dismissed pursuant to a settlement in August 2017;
- *Uniloc USA, Inc. et al. v. TangoMe, Inc. d/b/a Tango*, No. 2:16-cv-00733 (E.D. Tex.), was dismissed pursuant to a settlement in January 2017;
- *Uniloc USA, Inc. et al. v. BlackBerry Corporation et al.*, No. 2:16-cv-00639 (E.D. Tex.), was dismissed pursuant to a settlement in July 2017;
- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc.*, No. 2:16-cv-00642 (E.D. Tex.), was dismissed pursuant to a settlement in May 2020;
- *Uniloc USA, Inc. et al. v. Viber Media S.a.r.l.*, No. 2:16-cv-00643 (E.D. Tex.), was dismissed pursuant to a settlement in January 2017; and
- *Uniloc USA, Inc. et al. v. VoxerNet LLC*, No. 2:16-cv-00644 (E.D. Tex.), was dismissed pursuant to a settlement in December 2016.

The details of these settlements are not publicly available.

145. Of the 30 suits that were not resolved with case filings expressly referencing a settlement, ten were dismissed with prejudice (possibly indicating settlements), and one was dismissed without prejudice. The remaining nineteen cases were stayed pending *inter partes* review.

146. Defendant Uniloc 2017, under Fortress's control, began a similar litigation campaign in 2018 based on the '252 patent and the '622 patent. During 2018 and 2019, Defendant Uniloc 2017 asserted either the '252 patent or the '622 patent in six lawsuits:

- *Uniloc 2017 LLC et al. v. Microsoft Corporation*, No. 8:18-cv-01320 (C.D. Cal.);
- *Uniloc 2017 LLC et al. v. Hike Ltd. et al.*, No. 2:18-cv-00417 (E.D. Tex.);
- *Uniloc 2017 LLC et al. v. Apple Inc.*, No. 1:18-cv-00907 (W.D. Tex.), subsequently refiled as No. 1:18-cv-00991 (W.D. Tex.), subsequently transferred as No. 5:19-cv-01929 (N.D. Cal.) (EJD);

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- *Uniloc 2017 LLC v. Microsoft Corp.*, No. 8:18-cv-02054 (C.D. Cal.);
- *Uniloc 2017 LLC v. Hike Ltd. et al.*, No. 2:18-cv-00515 (E.D. Tex.); and
- *Uniloc 2017 LLC v. Microsoft Corporation*, No. 8:19-cv-00780 (C.D. Cal.).

147. Of Uniloc 2017's six suits based on the '252 and '622 patents, at least two resulted in settlement: *Uniloc 2017 LLC et al. v. Hike Ltd. et al.*, No. 2:18-cv-00417 (E.D. Tex.) and *Uniloc 2017 LLC v. Hike Ltd. et al.*, No. 2:18-cv-00515 (E.D. Tex.) were dismissed pursuant to an April 2019 settlement. Details regarding the settlement are not publicly available.

148. Of the four suits that were not resolved with case filings expressly referencing a settlement, three were stayed pending *inter partes* review and one was dismissed without prejudice.

149. Apple has been injured by the elimination of competition resulting from Defendants' aggregation of patents in the Network-based Voice Messaging Patents Market. Specifically, by eliminating competition, this aggregation positioned Fortress and the Uniloc Defendants to seek supracompetitive royalties that the prior patent holders were unable to seek because of the competitive constraints they faced. Because it has refused to capitulate to exorbitant royalty demands, Apple has been injured by Fortress and the Uniloc Defendants having targeted Apple as part of their litigation campaigns based on these patents. Moreover, Apple and Intel have been injured as a result of the ongoing threat that Defendants will continue to assert patents in the Network-based Voting Messaging Patents Market against them.

150. On June 14, 2016, Defendants Uniloc Luxembourg and Uniloc USA sued Apple in the Eastern District of Texas, claiming that Apple's iOS and iMessage Tap to Talk Feature infringed the '5890 patent, the '723 patent, the '622 patent, and the '433 patent.<sup>57</sup> The case was stayed pending *inter partes* review proceedings. Ultimately, the PTAB's Final Written Decisions

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<sup>57</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:16-cv-00638 (E.D. Tex.).



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declared all asserted claims of all asserted patents unpatentable.<sup>58</sup>

151. On October 22, 2018, Defendant Uniloc 2017 and Uniloc Licensing USA LLC (“Uniloc Licensing”) sued Apple in the Western District of Texas, claiming that Apple’s iMessage audio messaging feature infringed the ’252 patent.<sup>59</sup> Less than one month later, on November 17, 2018, Defendant Uniloc 2017 and Uniloc Licensing voluntarily dismissed the case. That same day, Defendant Uniloc 2017 sued Apple in the same District, again claiming that Apple’s iMessage audio messaging feature infringed the ’252 patent. That case was transferred to the Northern District of California, where it is stayed pending resolution of *inter partes* review proceedings. Defendant Uniloc 2017’s estimated damages for Apple’s alleged infringement of the ’252 patent are \$489,607,520. This damages demand is significantly more than the original owner of the ’252 patent—Philips—has demanded for other of its patents. [REDACTED]

[REDACTED] In a July 22, 2020 Final Written Decision, the PTAB declared all asserted claims of the ’252 patent unpatentable.<sup>60</sup>

152. The supracompetitive licensing returns Fortress’s PAEs have obtained are direct evidence of Defendants’ market power and the anticompetitive effects that have resulted from their anticompetitive patent aggregation scheme. For example, the Uniloc Defendants have been able to coerce several parties (including at least Hike Ltd., Kyocera America, Inc., Huawei Device

<sup>58</sup> *Apple Inc. v. Uniloc USA, Inc.*, IPR2017-00221, Paper No. 33 (PTAB May 23, 2018) (determining the asserted claims of the ’5890 patent to be unpatentable); *Apple Inc. v. Uniloc Luxembourg S.A.*, IPR2017-00222, Paper No. 29 (PTAB May 23, 2018) (determining the asserted claims of the ’723 patent to be unpatentable); *Facebook, Inc. v. Uniloc 2017 LLC*, IPR2017-01667, Paper No. 37 (PTAB Jan. 16, 2019) (determining the asserted claims of the ’622 patent to be unpatentable); *Facebook, Inc. v. Uniloc 2017 LLC*, IPR2017-01668, Paper No. 35 (PTAB Jan. 16, 2019) (same); *Facebook, Inc. v. Uniloc 2017 LLC*, IPR2017-01427, Paper No. 46 (PTAB Nov. 30, 2018) (determining claims 1-8, among others, of the ’433 patent to be unpatentable); *Facebook, Inc. v. Uniloc 2017 LLC*, IPR2017-01428, Paper No. 40 (PTAB Nov. 30, 2018) (same); *Samsung Elecs. v. Uniloc 2017 LLC*, IPR2017-01801, Paper No. 31 (PTAB Jan. 31, 2019) (determining claims 1-5 and 8, among others, of the ’433 patent to be unpatentable).

<sup>59</sup> *Uniloc 2017 LLC et al v. Apple Inc.*, No. 1:18-cv-00907 (W.D. Tex.), subsequently refiled as No. 1:18-cv-00991 (W.D. Tex.), and subsequently transferred as 5:19-cv-01929 (N.D. Cal.).

<sup>60</sup> *Unified Patents LLC v. Uniloc 2017 LLC*, IPR2019-00453, Paper No. 38 (PTAB July 22, 2020).

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1 USA, Inc., AOL Inc., TangoMe, Inc., Blackberry Corporation, Samsung Electronics America, Inc.,  
2 Viber Media S.a.r.l., and VoxerNet LLC) to license its patents in the Network-based Voice  
3 Messaging Patents Market, even though the prior owners of the patents made no similar attempt  
4 to enforce the patents. Fortress (through its PAEs) has been able to acquire patents and then,  
5 through the benefit of its anticompetitive scheme, extract inflated royalties from licensees that  
6 reflect the elimination of competition from Defendants' patent aggregation and far exceeds the  
7 actual value of the patents based on their technical and commercial merits.

8 153. Defendants' demands also show that Fortress has the power to control prices in the  
9 Network-based Voice Messaging Patents Market. As detailed above, Fortress-backed entities have  
10 sought hundreds of millions of dollars from Apple.

**B. Remote Software Updates**

12 154. As another example, Fortress, the Uniloc Defendants, and Seven Networks have  
13 aggregated patents that purportedly cover techniques for identifying devices that are eligible for  
14 remote software updates. Remote software updates are how software programs that run on  
15 consumers' electronic devices can be updated through remote means (*e.g.*, downloading and  
16 installing a software patch to fix a bug or updates for operating software) rather than, for example,  
17 the user needing to physically take an electronic device to a different location for new software  
18 installation. Remote software updates have become the commonplace means to provide software  
19 updates, including because they provide consumer convenience. One step in providing remote  
20 software updates involves identifying devices eligible for remote updates. There is no close  
21 substitute for techniques for identifying eligible devices.

22 155. Fortress, the Uniloc Defendants, and Seven Networks have aggregated patents in  
23 an antitrust market for patents for identification of devices that are eligible for remote software  
24 updates, the "Remote Software Updates Patents Market." The Remote Software Updates Patents  
25 Market constitutes a relevant antitrust market in which Fortress (either directly through its PAE  
26 subsidiaries or by acting in concert with the PAEs in which it invests) and other holders of patents  
27 claimed to read on electronic devices and/or programs that use techniques for identifying devices  
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1 that are eligible for remote software updates compete with one another to license patents to  
2 suppliers of such devices and supporting software.

3 156. Among the substitute patents Defendants have aggregated in the Remote Software  
4 Updates Patents Market are U.S. Patent No. 8,239,852, U.S. Patent No. 6,467,088, U.S. Patent No.  
5 6,110,228, and U.S. Patent No. 8,078,158, all of which purport to cover alternative techniques for  
6 identifying devices that are eligible for remote software updates.

7 157. U.S. Patent No. 8,239,852 (“the ’852 patent”) is titled “Remote Update of  
8 Computers Based on Physical Device Recognition” and issued on August 7, 2012. According to  
9 its abstract, the ’852 patent relates to “[a] system for remotely updating a program configuration  
10 [that] includes an update server in communication with a client device configured to execute a  
11 remote update program.” It claims methods for updating software remotely, including by using  
12 device identifiers to determine eligibility for software or configuration updates.

13 158. On its face, the ’852 patent is assigned to Defendant Uniloc Luxembourg. On  
14 December 30, 2014, Defendant Uniloc Luxembourg conveyed a security interest in the ’852 patent  
15 to Defendant Fortress Credit. On May 3, 2018, Defendant Uniloc Luxembourg assigned the ’852  
16 patent to Uniloc 2017.

17 159. U.S. Patent No. 6,467,088 (“the ’088 patent”) is titled “Reconfiguration Manager  
18 for Controlling Upgrades of Electronic Devices” and issued on October 15, 2002. According to  
19 its abstract, the ’088 patent relates to “[a] reconfiguration manager implemented on a computer or  
20 other data processing device [that] controls the reconfiguration of software or other components  
21 of an electronic device such as a computer, personal digital assistant (PDA), set-top box, television,  
22 etc.” Like the ’852 patent, the ’088 patent also purports to cover methods for updating software  
23 remotely, including by using device identifiers to determine eligibility for software or  
24 configuration updates. The ’088 patent overlaps to such an extent with the ’852 patent that, during  
25 prosecution of the application that led to the ’852 patent, the patent examiner rejected draft claims  
26 in that application based on the ’088 patent.

27 160. On its face, the ’088 patent is assigned to Philips. On January 30, 2009, Philips  
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1 assigned the '088 patent to IPG Electronics 503. On April 10, 2012, IPG Electronics 503 assigned  
2 the '088 patent to Pendragon Wireless. On January 31, 2018, Pendragon Wireless assigned the  
3 '088 patent to Defendant Uniloc Luxembourg (which was, by that time, under Fortress's control).  
4 On May 3, 2018, Defendant Uniloc Luxembourg assigned the '088 patent to Defendant Uniloc  
5 2017.

6 161. U.S. Patent No. 6,110,228 ("the '228 patent") is titled "Method and Apparatus for  
7 Software Maintenance at Remote Nodes" and issued on August 29, 2000. According to its  
8 abstract, the '228 patent relates to "[a] computer network system [that] includes a central software  
9 service site that operates with a customer interface through which a customer at a remote location  
10 can request service and receive updated executable code back from the service site." It claims  
11 methods for servicing software at a remote location, focusing on the customer interface for  
12 manually identifying the device requesting service from the remote location.

13 162. On its face, the '228 patent is assigned to International Business Machines  
14 Corporation ("IBM"). On February 17, 2017, IBM assigned the '228 patent to Defendant Uniloc  
15 Luxembourg (which was, by that time, beholden to Fortress), and the patent was thereby made  
16 subject to a December 30, 2014 security interest Defendant Uniloc Luxembourg and Defendant  
17 Uniloc USA had conveyed to Defendant Fortress Credit. On May 3, 2018, Defendant Uniloc  
18 Luxembourg assigned the '228 patent to Defendant Uniloc 2017.

19 163. U.S. Patent No. 8,078,158 ("the '158 patent") is titled "Provisioning Applications  
20 for a Mobile Device" and issued on December 13, 2011. According to its abstract, the '158 patent  
21 relates to "provisioning an application for a mobile device." Its claims describe techniques for  
22 provisioning a software application on a remote mobile device by providing configuration  
23 information to the user.

24 164. On its face, the '158 patent is assigned to Seven Networks, Inc. As noted above,  
25 Fortress converted Seven Networks Inc. to Seven Networks LLC in 2015.

26 165. Defendants' aggregation of patents in the Remote Software Updates Patents Market  
27 (including at least four substitute patents) has reduced competition in that market, leading to  
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1 inflated royalties and decreased licensing output. For example, as detailed further below,  
2 Defendants' aggregation of patents in the Remote Software Updates Patents Market has reduced  
3 competition in that market, leading to inflated royalties and decreased licensing output in the  
4 market. Specifically, Defendants have asserted that the '852 patent covers a method of providing  
5 software updates where a "device identifier" is used to determine eligibility for an update.  
6 Defendants have also asserted that the '088 patent covers a method of providing software updates  
7 in which a list of acceptable and unacceptable configurations is used to determine eligibility for an  
8 update. Absent Defendants' unlawful aggregation, the use of a device identifier to determine  
9 eligibility for an update can be a substitute for the use of a configuration list, and vice versa. When  
10 the '852 and '088 patents were owned by different entities, a party wishing to use one of these  
11 potential substitute technologies would be able to take advantage of competition between the  
12 owners of these patents when attempting to secure a license. But because of Defendants' unlawful  
13 aggregation of patent rights, Defendants now control both substitute technologies, making such  
14 competition impossible.

15 166. That lessening of competition is reflected by the evidence of supracompetitive  
16 royalties sought and received by Defendants following the aggregations. Whereas the prior owners  
17 of the '088 patent (Philips, then Pendragon Wireless) and the '228 patent (IBM) never asserted  
18 these patents because of the competitive constraints they faced, Defendants have pursued  
19 numerous assertions of these patents and the substitute '852 patent and secured at least one  
20 settlement for substantial royalties.

21 167. Specifically, Defendants Uniloc Luxembourg and Uniloc USA (under Fortress's  
22 control) began a litigation campaign in 2017 based on the '852 patent, the '088 patent, and the  
23 '228 patent shortly after acquiring the '228 patent from IBM. Between March 2017 and June  
24 2018, Defendants Uniloc Luxembourg and Uniloc USA asserted one of these three patents in 14  
25 lawsuits:

- 26 • *Uniloc USA, Inc. et al. v. Big Fish Games, Inc.*, No. 2:17-cv-00172 (E.D. Tex.),  
27 subsequently transferred as No. 2:17-cv-01183 (W.D. Wash.);
- 28 • *Uniloc USA, Inc. et al. v. Box, Inc.*, No. 2:17-cv-00173 (E.D. Tex.);

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- *Uniloc USA, Inc. et al. v. Nutanix, Inc.*, No. 2:17-cv-00174 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Ubisoft, Inc.*, No. 2:17-cv-00175 (E.D. Tex.), subsequently transferred as No 4:18-cv-02646 (N.D. Cal.) (JSW);
- *Uniloc USA, Inc. et al. v. Zendesk, Inc.*, No. 2:17-cv-00176 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Riot Games, Inc.*, No. 2:17-cv-00275 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Nexon America, Inc.*, No. 2:17-cv-00276 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Square Enix, Inc.*, No. 2:17-cv-00302 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Kaspersky Lab, Inc.*, No. 2:17-cv-00305 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Infor, Inc.*, No. 2:17-cv-00370 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Box, Inc.*, No. 1:17-cv-00754 (W.D. Tex.), subsequently transferred as No. 4:18-cv-03364 (N.D. Cal.) (JSW);
- *Uniloc USA, Inc. et al. v. Infor, Inc.*, No. 3:17-cv-02119 (N.D. Tex.);
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex.), subsequently transferred as No. 5:18-cv-00357 (N.D. Cal.) (LHK); and
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 1:18-cv-00296 (W.D. Tex.).

168. Of the 14 lawsuits based on the '852 patent, the '088 patent, or the '228 patent, at least one resulted in a settlement: *Uniloc USA, Inc. et al. v. Zendesk, Inc.*, No. 2:17-cv-00176 (E.D. Tex.) was dismissed pursuant to a settlement in August 2017. The details of the parties' settlement agreement are not publicly available.

169. Of the thirteen suits that were not resolved with case filings expressly referencing a settlement, four were dismissed with prejudice (possibly indicating settlements), seven were dismissed without prejudice, one remains stayed pending appellate review of a related district court decision, and one remains active.

170. In July 2019, Defendant Uniloc 2017 (under Fortress's control) started a similar litigation campaign based on the '088 patent specifically. Defendant Uniloc 2017 has asserted the '088 patent in two lawsuits:

- *Uniloc 2017 LLC v. Microsoft Corp.*, No. 8:19-cv-00956 (C.D. Cal.); and
- *Uniloc 2017 LLC v. Apple Inc.*, No. 6:19-cv-00532 (W.D. Tex.).

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171. Defendant Uniloc 2017's action against Microsoft Corporation was stayed pending *inter partes* review proceedings.

172. In May 2017, Seven Networks (under Fortress's control) also filed a lawsuit based on a patent—the '158 patent—in the Remote Software Updates Patents Market. Seven Networks sued Google in the Eastern District of Texas, alleging that the Google Play Store infringes the '158 patent.<sup>61</sup> In response, Google filed an action for declaratory judgment in the Northern District of California, seeking, among other declarations, a declaration that the Google Play Store does not infringe the '158 patent.<sup>62</sup> Ultimately, both actions ended with settlements between Seven Networks and Google.

173. Apple has been injured by the elimination of competition resulting from Defendants' aggregation of patents in the Remote Software Updates Patents Market. Specifically, this aggregation positioned Fortress and the Uniloc Defendants to seek supracompetitive royalties that the prior patent holders were unable to seek because of the competitive constraints they faced. Because it has refused to capitulate to exorbitant royalty demands, Apple has been injured by Fortress and the Uniloc Defendants having targeted Apple as part of their litigation campaigns based on these patents. Moreover, Apple and Intel have been injured as a result of the ongoing threat that Defendants will continue to assert patents in the Remote Software Updates Patents Market against them.

174. In April 2017, Defendants Uniloc USA and Uniloc Luxembourg sued Apple, alleging that Apple has infringed the '852 patent by making and selling software and devices that provide for receiving updates from Apple.<sup>63</sup> Defendants Uniloc USA and Uniloc Luxembourg also accused Apple of infringing two additional patents. The case was transferred to the Northern District of California, where the case was stayed pending *inter partes* review proceedings. After *inter partes* review proceedings, followed by an appeal to the United States Court of Appeals for

<sup>61</sup> *Seven Networks, LLC v. Google LLC*, No. 2:17-cv-00442 (E.D. Tex. May 17, 2017).

<sup>62</sup> *Google LLC v. Seven Networks, LLC*, No. 3:17-cv-04600 (N.D. Cal. Aug. 10, 2017) (WHO).

<sup>63</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex. Apr. 3, 2017), subsequently transferred as 5:18-cv-00357 (N.D. Cal.) (LHK).



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the Federal Circuit, the case resumed. Defendant Uniloc 2017's estimated damages for Apple's infringement of the '852 patent are between \$756,709,869 and \$1,475,852,582.<sup>64</sup> This is far more than the original owners of other patents in the Remote Software Update Patents Market—Philips with respect to the '088 patent and IBM with respect to the '228 patent—have sought for other patents. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

175. In April 2018, Defendants Uniloc Luxembourg and Uniloc USA sued Apple in the Western District of Texas, alleging that Apple devices that run iOS operating systems, including iPhones, iPads, iPods, the App Store, and associated servers implementing iOS update functionality, infringe the '088 patent.<sup>65</sup> In July 2018, Defendants Uniloc Luxembourg and Uniloc USA voluntarily dismissed the case without prejudice. Just over one year later, in September 2019, Defendant Uniloc 2017 sued Apple in the Western District of Texas, again alleging that Apple devices infringe the '088 patent.<sup>66</sup>

176. The supracompetitive licensing returns Fortress's PAEs have sought and obtained are direct evidence of Defendants' market power and the anticompetitive effects that have resulted from their anticompetitive patent aggregation scheme. For example, the Uniloc Defendants and Seven Networks have been able to coerce at least Zendesk, Inc. and Google to license its patents in the Remote Software Updates Patents Market, even though the prior owners of the patents made no similar attempt to enforce the patents because of the competitive constraints they faced. Fortress (through its PAEs) has been able to acquire patents and then, through the benefit of its anticompetitive scheme, extract inflated royalties from licensees that reflect the competition that

<sup>64</sup> Defendant Uniloc 2017 stepped into the shoes of Defendant Uniloc Luxembourg and Defendant Uniloc USA after the '852 patent was transferred to Uniloc 2017.

<sup>65</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 1:18-cv-00296 (W.D. Tex. Apr. 9, 2018).

<sup>66</sup> *Uniloc 2017 LLC v. Apple Inc.*, No. 6:19-cv-00532 (W.D. Tex. Sept. 20, 2019).

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1 has been eliminated through Defendants’ patent aggregation and far exceeds the actual value of  
2 the patents based on their technical and commercial merits.

3 177. Defendants’ demands also show that Fortress has the power to control prices in the  
4 Remote Software Updates Patents Market. As detailed above, Fortress-backed entities have  
5 sought in excess of a billion dollars from Apple.

6 **C. Mobile Device-to-Device Communication**

7 178. As another example, Fortress, the Uniloc Defendants, Seven Networks, and IXI IP  
8 have aggregated patents relating to mobile device-to-device communication. Mobile device-to-  
9 device communication techniques enable two or more mobile devices to communicate over a  
10 network efficiently and securely. This is a common feature that many electronic devices, such as  
11 smartphones, incorporate.

12 179. Defendants have aggregated patents in an antitrust market for patents purporting to  
13 cover mobile device-to-device communication capabilities, the “Mobile Device-to-Device  
14 Communication Patents Market.” The Mobile Device-to-Device Communication Patents Market  
15 constitutes a relevant antitrust market where Fortress (either directly through its PAE subsidiaries  
16 or by acting in concert with the PAEs in which it invests) and other holders of patents claimed to  
17 read on electronic devices that support mobile device-to-device communication capabilities  
18 compete with one another to license patents to suppliers of such devices and supporting software.

19 180. Among the substitute patents Defendants have aggregated in the Mobile Device-  
20 to-Device Communication Patents Market are U.S. Patent No. 7,136,999, U.S. Patent No.  
21 9,712,986, U.S. Patent No. 8,018,877, U.S. Patent No. 6,446,127, U.S. Patent No. 6,161,134, U.S.  
22 Patent No. 7,299,008, U.S. Patent No. 6,845,097, and U.S. Patent No. 7,551,593, all of which  
23 purport to cover alternative techniques to establish communication between multiple devices that  
24 are connected via a network.

25 181. U.S. Patent No. 7,136,999 (“the ’999 patent”) is titled “Method and System for  
26 Electronic Device Authentication” and issued on November 14, 2006. According to its abstract,  
27 the ’999 patent relates to “[e]lectronic devices [that] are authenticated to each other initially over  
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1 a short-range wireless link.” The ’999 patent is directed to methods that allow two devices that  
2 might normally communicate only using short-range methods (*e.g.*, Bluetooth) to communicate  
3 even if they are not in range of each other.

4 182. On its face, the ’999 patent is assigned to Philips. On March 3, 2009, Philips  
5 Electronics North America Corporation (“Philips Electronics”) assigned the ’999 patent to IPG  
6 Electronics 503. On April 10, 2012, IPG Electronics 503 assigned the ’999 patent to Pendragon  
7 Wireless. On January 31, 2018, Pendragon Wireless assigned the ’999 patent to Defendant Uniloc  
8 Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg assigned the ’999 patent to  
9 Defendant Uniloc 2017.

10 183. U.S. Patent No. 9,712,986 (“the ’986 patent”) is titled “Mobile Device Configured  
11 for Communicating with Another Mobile Device Associated with an Associated User” and issued  
12 on July 18, 2017. According to its abstract, the ’986 patent relates to “[a] mobile virtual network  
13 operator [that] is disclosed as an entity that provides a mobile networking service to a user, the  
14 mobile networking service being provided using a physical mobile network provided by a third  
15 party.” The ’986 patent is directed to multiple devices receiving coordinated services from a  
16 particular service provider (*e.g.*, app developer).

17 184. On its face, the ’986 patent is assigned to Seven Networks, Inc. As noted above,  
18 Fortress converted Seven Networks Inc. to Seven Networks LLC in 2015.

19 185. U.S. Patent No. 8,018,877 (“the ’877 patent”) is titled “Mobile Conferencing  
20 Method and System” and issued on September 13, 2011. According to its abstract, the ’877 patent  
21 relates to “[a] server-based architecture for mobile conferencing.” The ’877 patent is directed to  
22 particular methods of exchanging data between mobile devices, including allocating a network  
23 address and server port to a mobile device, sending the network address and the server port to the  
24 mobile device, and exchanging data with the mobile device.

25 186. On its face, the ’877 patent is assigned to inventor Daniel Lin. On April 27, 2012,  
26 inventor Daniel Lin assigned the ’877 patent to Pendragon Wireless. On January 31, 2018,  
27 Pendragon Wireless assigned the ’877 patent to Defendant Uniloc Luxembourg. On May 3, 2018,  
28

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1 Defendant Uniloc Luxembourg assigned the '877 patent to Defendant Uniloc 2017.

2 187. U.S. Patent No. 6,446,127 (“the ’127 patent”) is titled “System and Method for  
3 Providing User Mobility Services on a Telephony Network” and issued on September 3, 2002.  
4 According to its abstract, the ’127 patent relates to “[a] system and method for providing user  
5 mobility services on a data network telephony system.” The ’127 patent is directed to a technique  
6 for synchronizing user identification information contained on a mobile device with a network-  
7 connected device.

8 188. On its face, the ’127 patent is assigned to 3Com Corporation (“3Com Corp.”). It  
9 has the same assignment history as the ’616 patent: On April 28, 2010, in connection with a  
10 merger, 3Com Corp. assigned the ’127 patent to Hewlett-Packard Company (“HP”). Effective  
11 October 10, 2011, HP assigned the ’127 patent to Hewlett-Packard Development Company, L.P.  
12 (“HP Development”), and on October 27, 2015, HP Development assigned the ’127 patent to  
13 Hewlett Packard Enterprise Development LP (“HP Enterprise Development”). On May 16, 2017,  
14 HP Enterprise Development assigned the ’127 patent to Uniloc Luxembourg. On May 3, 2018,  
15 Uniloc Luxembourg assigned the ’127 patent to Uniloc 2017.

16 189. U.S. Patent No. 6,161,134 (“the ’134 patent”) is titled “Method, Apparatus and  
17 Communications System for Companion Information and Network Appliances” and issued on  
18 December 12, 2000. According to its abstract, the ’134 patent relates to “an information appliance  
19 and a network appliance (or telephone) that function independently as well as with each other as  
20 companion appliances.” The ’134 patent is directed to a technique for substituting a device  
21 identifier of a first device with a device identifier of a second device connected to the first device.

22 190. On its face, the ’134 patent is assigned to 3Com Corp. It has the same assignment  
23 history as the ’127 patent: On April 28, 2010, in connection with a merger, 3Com Corp. assigned  
24 the ’134 patent to HP. Effective October 10, 2011, HP assigned the ’134 patent to HP  
25 Development. On October 27, 2015, HP Development assigned the ’134 patent to HP Enterprise.  
26 On May 16, 2017, HP Enterprise assigned the ’134 patent to Uniloc Luxembourg, and on May 3,  
27 2018, Uniloc Luxembourg assigned the ’134 patent to Uniloc 2017.

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1           191. U.S. Patent No. 7,299,008 (“the ’008 patent”) is titled “Call Management System  
2 and Method for Servicing Multiple Wireless Communication Devices” and issued on  
3 November 20, 2007. According to its abstract, the ’008 patent relates to “[a] method for  
4 establishing a wireless communication interface between a call management device and a plurality  
5 of mobile communication devices.” The ’008 patent is directed to techniques for establishing a  
6 wireless communication interface between a call management device and a plurality of mobile  
7 communication devices.

8           192. On its face, the ’008 patent is assigned to IXI Mobile, Ltd. On June 5, 2014, IXI  
9 R&D assigned the ’008 patent to Defendant IXI IP, and IXI IP conveyed a security interest in the  
10 ’008 patent to Fortress Credit. On September 11, 2014, Fortress Credit conveyed its security  
11 interest in the ’008 patent to FCO V CLO Transferor LLC, a Fortress affiliate.

12           193. U.S. Patent No. 6,845,097 (“the ’097 patent”) and U.S. Patent No. 7,551,593 (“the  
13 ’593 patent”) are in the same patent family; are titled “Device, System, Method and Computer  
14 Readable Medium for Pairing of Devices in a Short Distance Wireless Network”; and issued on  
15 January 18, 2005 and June 23, 2009, respectively. Their abstracts indicate that the ’097 patent and  
16 the ’593 patent relate to “[a] device, a system, a method and a computer readable medium allowing  
17 a user to efficiently and easily add/remove or pair a processing device to a short distance wireless  
18 network.” The ’097 patent and the ’593 patent are directed to techniques for automatically pairing  
19 devices to form a short distance wireless network.

20           194. The patent assignment histories for the ’097 patent and the ’593 patent are the same.  
21 Both are assigned to IXI R&D on their face. On June 5, 2014, IXI R&D assigned them both to  
22 Defendant IXI IP, and IXI IP conveyed a security interest to Fortress Credit. On September 11,  
23 2014, Fortress Credit conveyed its security interest in the ’097 patent and the ’593 patent to FCO  
24 V CLO Transferor LLC, a Fortress affiliate.

25           195. In addition to the patents discussed immediately above, which are substitutes for  
26 one another, Defendant Seven Networks has obtained an additional patent relating to mobile  
27 device-to-device communication that is a complement to, and possibly a substitute for, the ’999  
28

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1 patent, the '986 patent, the '877 patent, the '127 patent, the '134 patent, the '008 patent, the '097  
2 patent, and the '593 patent.

3 196. U.S. Patent No. 9,769,176 (“the '176 patent”) is titled “Multiple Data Store  
4 Authentication” and issued on September 19, 2017. According to its abstract, the '176 patent  
5 relates to “authenticating access to multiple data stores substantially in real-time.” The '176 patent  
6 is directed to systems and methods for registering a client device and sharing data between the  
7 client device and a data store.

8 197. On its face, the '176 patent is assigned to Defendant Seven Networks.

9 198. Defendants’ aggregation of patents (including at least eight substitute patents and  
10 one complementary and/or substitute patent) in the Mobile Device-to-Device Communication  
11 Patents Market has reduced competition in that market, leading to inflated royalties and decreased  
12 licensing output. For example, Defendants have asserted that the '008 patent covers a method of  
13 establishing a wireless communications interface between a call management device and a  
14 plurality of mobile communication devices. Defendants have also asserted that the '127 and '134  
15 patents cover methods of establishing a communications interface between a call management  
16 device (personal information device) and a single communications device. Using “one to many”  
17 can be a substitute for using “one to one” call management architecture, and vice versa. When the  
18 '008 patent and '127/'134 patents were owned by different entities, a party wishing to license a  
19 solution for mobile device-to-device communications would be able to take advantage of  
20 competition between the owners of these patents when attempting to secure a license. But because  
21 of Defendants’ unlawful aggregation of patents, Defendants now control both substitute  
22 technologies, eliminating such competition.

23 199. That lessening of competition is reflected by the evidence of supracompetitive  
24 royalties sought and received by Defendants following the aggregations. Whereas the prior owners  
25 of the '999 patent (Philips Electronics, IPG Electronics 503, then Pendragon Wireless), the '877  
26 patent (Daniel Lin, then Pendragon Wireless), and the '127 patent (3Com Corp., then HP), and the  
27 '134 patent (3Com Corp., then HP) never asserted these patents because of the competitive  
28

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constraints they faced, the Uniloc Defendants have pursued numerous assertions and secured at least one settlement for substantial royalties.

200. Specifically, the Uniloc Defendants (under Fortress's control) began a litigation campaign in 2018 based on these patents. Between February 2018 and April 2019, the Uniloc Defendants asserted at least one of the '999 patent and the '877 patent in three lawsuits:

- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 1:18-cv-00166 (W.D. Tex.), subsequently transferred as No. 4:19-cv-01696 (N.D. Cal.) (YGR);
- *Uniloc 2017 LLC et al. v. Apple Inc.*, No. 1:18-cv-00838 (W.D. Tex.), subsequently refiled as No. 1:18-cv-00990 (W.D. Tex.), subsequently transferred as No. 3:19-cv-01904 (N.D. Cal.) (WHO); and
- *Uniloc 2017 LLC v. Samsung Electronics America, Inc. et al.*, No. 2:19-cv-00126 (E.D. Tex.).

201. Of the three lawsuits based on these patents, at least one resulted in a settlement: *Uniloc 2017 LLC v. Samsung Electronics America, Inc. et al.*, No. 2:19-cv-00126 (E.D. Tex.) was dismissed pursuant to a settlement in May 2020. The details of the parties' settlement are not publicly available.

202. The Uniloc Defendants, under the control of Fortress, have also asserted the '127 and '134 patents against Apple in *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00535 (E.D. Tex. July 12, 2017), subsequently transferred as No. 3:18-cv-00572 (N.D. Cal.).

203. Seven Networks, under the control of Fortress, has also sought to enforce the '986 patent and the '176 patent in *Seven Networks, LLC v. Apple Inc.*, No. 2:19-cv-00115 (E.D. Tex.).

204. Apple has been injured by the elimination of competition resulting from Defendants' aggregation of patents in the Mobile Device-to-Device Communication Patents Market. Specifically, by eliminating competition, this aggregation positioned Defendants to seek supracompetitive royalties that the prior patent holders were unable to seek because of the competitive constraints they faced. Because it has refused to capitulate to exorbitant royalty demands, Apple has been injured by Fortress, the Uniloc Defendants, and Seven Networks having targeted Apple as part of their litigation campaign based on these patents. Moreover, Apple and Intel have been injured as a result of the ongoing threat that Defendants will continue to assert



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1 patents in the Mobile Device-to-Device Communication Patents Market against them.

2       205. Specifically, on February 22, 2018, Defendants Uniloc Luxembourg and Uniloc  
3 USA sued Apple in the Western District of Texas, alleging that devices that use Apple’s Push  
4 Notification service infringe the ’877 patent.<sup>67</sup> Defendants Uniloc Luxembourg and Uniloc USA  
5 also alleged infringement of three additional patents. The case was transferred to the Northern  
6 District of California, where Defendants Uniloc Luxembourg and Uniloc USA voluntarily  
7 dismissed the case two weeks after Apple filed a motion to dismiss.

8       206. On October 3, 2018, Defendant Uniloc 2017 and Uniloc Licensing USA sued Apple  
9 in the Western District of Texas, alleging that devices that use Apple’s AirDrop feature infringe  
10 the ’999 patent.<sup>68</sup> Less than seven weeks later, Defendant Uniloc 2017 and Uniloc Licensing USA  
11 voluntarily dismissed that case and, the same day, Defendant Uniloc 2017 refiled the lawsuit as a  
12 new case in the same District. The case was transferred to the Northern District of California,  
13 where the case is stayed pending *inter partes* review proceedings. Defendant Uniloc 2017  
14 estimates, as provided in damages contentions, that damages for Apple’s alleged infringement of  
15 the ’999 patent are at least \$162,240,692.

16       207. In addition, on July 12, 2017, Uniloc Luxembourg and Uniloc USA, under the  
17 control of Fortress, sued Apple in the Eastern District of Texas, claiming that electronic devices  
18 such as iPhones, iPads, iPods, and Mac devices that run iOS or Mac operating systems that include  
19 a “Continuity” capability that allows users to make a telephone call from such devices via an  
20 iPhone infringe the ’127 and ’134 patents.<sup>69</sup> The case was transferred to the Northern District of  
21 California, where the case was stayed pending *inter partes* review proceedings.

22       208. On April 10, 2019, Defendant Seven Networks sued Apple in the Eastern District  
23

24 \_\_\_\_\_  
25 <sup>67</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 1:18-cv-00166 (W.D. Tex. Feb. 22, 2018),  
subsequently transferred as 4:19-cv-01696 (N.D. Cal.) (YGR).

26 <sup>68</sup> *Uniloc 2017 LLC et al. v. Apple Inc.*, No. 1:18-cv-00838 (W.D. Tex. Oct. 3, 2018),  
subsequently refiled as 1:18-cv-00990, and subsequently transferred as 3:19-cv-01904 (N.D.  
27 Cal.) (WHO).

28 <sup>69</sup> *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00535 (E.D. Tex. July 12, 2017), subsequently  
transferred as No. 3:18-cv-00572 (N.D. Cal.) (WHA).

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1 of Texas. Defendant Seven Networks alleged that several models of the iPhone, iPad, Mac, iMac,  
2 and MacBook infringe the '986 patent and that Apple's servers, including those supporting Apple  
3 Push Notification Service functionality, infringe the '176 patent.<sup>70</sup> Defendant Seven Networks  
4 also alleged infringement of 14 additional patents. Defendant Seven Networks' estimated damages  
5 for Apple's infringement of the '176 patent alone are approximately [REDACTED].

6 209. The supracompetitive licensing returns Fortress's PAEs have obtained are direct  
7 evidence of its market power. For example, Uniloc 2017 has been able to coerce at least one party  
8 (Samsung Electronics America, Inc.) to license its patents in the Mobile Device-to-Device  
9 Communication Patents Market, even though the prior owners of the patents made no similar  
10 attempt to enforce the patents. Fortress (through its PAEs) has been able to acquire patents and  
11 then, through the benefit of its anticompetitive scheme, extract inflated royalties from licensees  
12 that reflect the competition that has been eliminated through Defendants' patent aggregation and  
13 far exceeds the actual value of the patents based on their technical and commercial merits.

14 210. Defendants' demands also show that Fortress has the power to control prices in the  
15 Mobile Device-to-Device Communication Patents Market. As detailed above, Defendants have  
16 sought hundreds of millions of dollars from Apple.

**D. Local Cache Management**

17  
18 211. As yet another example, Fortress, the Uniloc Defendants, and VLSI have  
19 aggregated patents relating to local cache management. Local cache management enables  
20 computer processors to store and retrieve information more efficiently. These techniques include  
21 selectively placing information in memory according to how recently or frequently that  
22 information is used. Local cache management is commonly used in electronic devices containing  
23 memory, and there is no close substitute for the functionality.

24 212. Fortress, the Uniloc Defendants, and VLSI have aggregated patents in an antitrust  
25 market for patents purporting to cover local cache management capabilities, the "Local Cache  
26

27  
28 <sup>70</sup> *Seven Networks, LLC v. Apple Inc.*, No. 2:19-cv-00115 (E.D. Tex. Apr. 10, 2019).

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1 Management Patents Market.” The Local Cache Management Patents Market constitutes a  
2 relevant antitrust market where Fortress (either directly through its PAE subsidiaries or by acting  
3 in concert with the PAEs in which it invests) and other holders of patents claimed to read on  
4 electronic devices that support local cache management compete with one another to license  
5 patents to suppliers of such devices.

6 213. Among the substitute patents Defendants have aggregated in the Local Cache  
7 Management Patents Market are U.S. Patent No. 6,301,641, U.S. Patent No. 6,058,437, and U.S.  
8 Patent No. 7,434,009, both of which purport to cover alternative techniques to improve the  
9 performance of local caching methods.

10 214. U.S. Patent No. 6,301,641 (“the ’641 patent”) is titled “Method for Reducing the  
11 Frequency of Cache Misses in a Computer” and issued on October 9, 2001. According to its  
12 abstract, the ’641 patent relates to “minimiz[ing] the number of cache misses that occur for a  
13 sample of a typical execution of the program.” The ’641 patent is directed to improving cache  
14 performance by optimizing the placement of information in a cache.

15 215. On its face, the ’641 patent is assigned to U.S. Philips Corporation (“U.S. Philips”).  
16 On April 13, 2009, U.S. Philips assigned the ’641 patent to IPG Electronics 503. On April 10,  
17 2012, IPG Electronics 503 assigned the ’641 patent to Pendragon Wireless. On January 31, 2018,  
18 Pendragon Wireless assigned the ’641 patent to Defendant Uniloc Luxembourg. On May 3, 2018,  
19 Defendant Uniloc Luxembourg assigned the ’641 patent to Defendant Uniloc 2017.

20 216. U.S. Patent No. 6,058,437 (“the ’437 patent”) is titled “D.M.A. Device That  
21 Handles Cache Misses by Managing an Address of an Area Allotted via a Daemon Processor” and  
22 issued on May 2, 2000. According to its abstract, the ’437 patent relates to “[a] direct memory  
23 access processing device of communication equipment.” Its claims are directed to improving  
24 cache performance by using a daemon processor to manage a portion of the memory.

25 217. On its face, the ’437 patent is assigned to Electronics & Telecommunications  
26 Research Institute (“ETRI”). On December 26, 2008, ETRI assigned one half of its interest in the  
27 ’437 patent to IPG Electronics 502 Limited (“IPG Electronics 502”). On April 10, 2012, IPG  
28

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1 Electronics 502 and ETRI assigned the '437 patent to Pendragon Electronics and  
2 Telecommunications Research LLC ("Pendragon Electronics"). On January 31, 2018, Pendragon  
3 Electronics assigned the '437 patent to Uniloc Luxembourg. On May 3, 2018, Uniloc Luxembourg  
4 assigned the '437 patent to Uniloc 2017.

5 218. U.S. Patent No. 7,434,009 ("the '009 patent") is titled "Apparatus and Method for  
6 Providing Information to a Cache Module Using Fetch Bursts" and issued on October 7, 2008.  
7 According to its abstract, the '009 patent relates to "providing information to a cache module."  
8 The '009 patent is directed to improving cache performance by optimizing the handling of cache  
9 misses.

10 219. On its face, the '009 patent is assigned to Freescale Semiconductor, Inc.  
11 ("Freescale"). On November 7, 2016, Freescale assigned the '009 patent to NXP USA, Inc. in  
12 connection with a merger with NXP and change of name. On February 1, 2019, NXP USA, Inc.  
13 assigned the '009 patent to Defendant VLSI.

14 220. In addition to the patents discussed immediately above, which are substitutes for  
15 one another, VLSI has acquired several additional patents directed to caching improvements that  
16 are complements to, and possibly substitutes for, the '641 patent and '009 patent.

17 221. U.S. Patent No. 8,219,761 ("the '761 patent") is titled "Multi-port High-level Cache  
18 Unit and a Method for Retrieving Information from a Multi-port High-level Cache Unit" and  
19 issued on July 10, 2012. On its face, the '761 patent is assigned to Freescale. On November 7,  
20 2016, Freescale assigned the '761 patent to NXP as part of the merger between the companies. On  
21 February 1, 2019, NXP assigned the '761 patent to Defendant VLSI.

22 222. U.S. Patent No. 7,523,331 ("the '331 patent") is titled "Power Saving Operation of  
23 an Apparatus with Cache Memory" and issued on April 21, 2009. On its face, the '331 patent is  
24 assigned to NXP B.V. On December 15, 2013, NXP B.V. assigned the '331 patent to Breakwaters  
25 Innovations LLC ("Breakwaters"). On March 3, 2015, Breakwaters assigned the '331 patent back  
26 to NXP B.V. On August 16, 2016, NXP B.V. assigned the '331 patent to Defendant VLSI.

27 223. U.S. Patent No. 8,020,014 ("the '014 patent") is titled "Method for Power  
28

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1 Reduction and a Device Having Power Reduction Capabilities” and issued on September 13, 2011.  
2 On its face, the ’014 patent is assigned to Freescale. On August 16, 2016, Freescale assigned the  
3 ’014 patent to Defendant VLSI.

4 224. U.S. Patent No. 8,156,357 (“the ’357 patent”) is titled “Voltage-based Memory Size  
5 Scaling in a Data Processing System” and issued on April 10, 2012. On its face, the ’357 patent  
6 is assigned to Freescale. On November 7, 2016, Freescale assigned the ’357 patent to NXP as part  
7 of the merger between the companies. On December 22, 2018, NXP assigned the ’357 patent to  
8 Defendant VLSI.

9 225. Defendants’ aggregation of patents in the Local Cache Management Patents Market  
10 (including at least three substitute patents and four complementary and/or substitute patents) has  
11 reduced competition in that market, leading to inflated royalties and decreased licensing output.  
12 For example, the ’641 patent and the ’009 patent both purport to cover techniques for improving  
13 local cache performance. Whereas the ’641 patent achieves the improvement by optimizing the  
14 placement of information in a cache, the ’009 patent obtains improved performance by optimizing  
15 how cache misses are handled. Accordingly, the cache placement method of the ’641 patent is a  
16 substitute for the cache miss handling method of the ’009 patent, and vice versa. When the ’641  
17 and ’009 patents were owned by different entities, a party wishing to use one of these potential  
18 substitute technologies would be able to take advantage of competition between the owners of  
19 these patents when attempting to secure a license. But because of Defendants’ unlawful  
20 aggregation of patents, Defendants now control both substitute technologies, eliminating such  
21 competition.

22 226. That lessening of competition is evidenced by the supracompetitive royalties sought  
23 by Defendants. Whereas the prior owners of the ’014 patent (Freescale), the ’331 patent (NXP  
24 B.V.), and the ’357 patent (Freescale, then NXP) never asserted these patents because of the  
25 competitive constraints they faced, Defendants have pursued multiple assertions.

26 227. Specifically, Defendant VLSI, under the control of Fortress, has pursued a litigation  
27 campaign based on these patents.  
28

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1           228. As part of the VLSI California Action described above, Defendant VLSI has  
2 alleged that Intel's microprocessors infringe the '014 patent by comprising features for selectively  
3 providing power to at least a portion of a component of an integrated circuit during a low power  
4 mode.<sup>71</sup> Defendant VLSI also accused Intel of infringing seven additional patents in that action.  
5 Intel sought VLSI's permission to disclose (under seal) the damages estimate for Intel's alleged  
6 infringement of the '014 patent, as well as the financial terms of its purchase of the patent from  
7 NXP (which had merged with Freescale); however, VLSI refused that consent. The damages  
8 estimates VLSI has disclosed publicly in connection with its assertion of the eight patents asserted  
9 in the VLSI California Action are exorbitant: as discussed above, VLSI disclosed that it would  
10 seek \$7.1 billion in that suit. That amount significantly exceeds what Freescale sought for this  
11 very patent. As discussed above, [REDACTED]

12 [REDACTED]  
13 [REDACTED] VLSI's damages estimate is also  
14 significantly more than Freescale has sought for other of its patents concerning microprocessor  
15 features. Specifically, in December 2014, Intel purchased from Freescale for [REDACTED] a total  
16 of 29 patent families, including 13 U.S. patents, for example: U.S. Patent Nos. 6,769,076 (Real-  
17 Time Processor Debug System); 6,845,419 (Flexible Interrupt Controller that Includes an Interrupt  
18 Force Register); 7,248,069 (Method and Apparatus for Providing Security for Debug Circuitry);  
19 5,889,788 (Wrapper Cell Architecture for Path Delay Testing of Embedded Core Microprocessors  
20 and Method of Operation); 6,134,675 (Method of Testing Multi-Core Processors and Multi-Core  
21 Processor Testing Device); 7,296,137 (Memory Management Circuitry Translation Information  
22 Retrieval during Debugging); 7,299,335 (Translation Information Retrieval Transparent to  
23 Processor Core); and 8,041,901 (Performance Monitoring Device and Method thereof). And in  
24 May 2015, [REDACTED], including  
25 patents such as: U.S. Patent Nos. 5,943,274 (Method and Apparatus for Amplifying a Signal to  
26 [REDACTED])

27 \_\_\_\_\_  
28 <sup>71</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 5:17-cv-05671 (N.D. Cal.) (BLF).

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1 Produce a Latched Digital Signal); 6,917,555 (Integrated Circuit Power Management for Reducing  
2 Leakage Current in Circuit Arrays and Method therefor); 7,200,719 (Prefetch Control in a Data  
3 Processing System); 7,638,903 (Power Supply Selection for Multiple Circuits on an Integrated  
4 Circuit); and 6,013,571 (Microelectronic Assembly including Columnar Interconnections and  
5 Method for Forming Same).

6 229. As part of the VLSI Delaware Action described above, Defendant VLSI alleged  
7 that Intel chipsets infringe the '331 patent.<sup>72</sup> Defendant VLSI also accused Intel of infringing four  
8 additional patents. Intel sought VLSI's permission to disclose (under seal) the damages it claims  
9 for Intel's alleged infringement of the '331 patent, as well as the financial terms of its purchase of  
10 the patent from NXP; however, VLSI refused that consent. The damages estimates VLSI has  
11 disclosed publicly in connection with the VLSI Delaware Action are exorbitant—as discussed  
12 above, VLSI disclosed that it would seek billions. This amount is significantly more than NXP  
13 has sought for other of its patents concerning microprocessor features. Specifically, in January  
14 2014, [REDACTED]  
15 [REDACTED], for example, U.S. Patent Nos. 7,500,126 (Arrangement and Method for Controlling  
16 Power Modes of Hardware Resources); 6,748,472 (Method and System for an Interrupt  
17 Accelerator that Reduces the Number of Interrupts for a Digital Signal Processor); 7,102,382  
18 (Digital Electronic Circuit with Low Power Consumption); and 8,181,054 (Arrangement and  
19 Method for Controlling Power Modes of Hardware Resources). In December 2014, [REDACTED]  
20 [REDACTED], for  
21 example, U.S. Patent Nos. 9,032,124 (Definition of Wakeup Bus Messages for Partial  
22 Networking); 6,664,821 (Line Driver with Current Source Output and Low Sensitivity to Load  
23 Variations); 8,407,339 (Star Network and Method for Preventing a Repeated Transmission of a  
24 Control Symbol in such a Star Network); 7,620,135 (Data Processing Apparatus that Identifies a  
25 Communication Clock Frequency); and 8,527,738 (Flexray System Using Efficient Storage of  
26

27 <sup>72</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 1:18-cv-00966 (D. Del.).  
28



**REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED**

1 Instructions). And in December 2014, [REDACTED]  
2 [REDACTED] including for example: U.S. Patent Nos. 9,939,141 (Active Thermal  
3 Management Device and Thermal Management Method); 9,078,318 (Switched Mode Power  
4 Converter and Method of Operating the Same); 9,036,375 (Controller that Determines Average  
5 Output Current of a Switching Circuit); 8,120,289 (Optical Electrical System in Package for LED  
6 Based Lighting System); and 7,688,600 (Multi-Resonance Converter).

7 230. And as part of the VLSI Texas Actions described above, Defendant VLSI has  
8 alleged that Intel's microprocessors infringe the '357 patent.<sup>73</sup> Defendant VLSI also accused Intel  
9 of infringing seven additional patents in these actions. Intel sought VLSI's permission to disclose  
10 (under seal) the damages claim for Intel's alleged infringement of the '014 patent, as well as the  
11 financial terms of its purchase of the patent from NXP (which had merged with Freescale);  
12 however, VLSI refused that consent. The damages claims VLSI has disclosed publicly in  
13 connection with its assertion of other patents obtained from the same prior owner are exorbitant:  
14 as discussed above, VLSI disclosed that it would seek \$7.1 billion in a suit involving eight patents  
15 and billions in a suit involving five patents. As discussed in paragraph 228 above, these amounts  
16 significantly exceed what Freescale sought for this very patent and other of its patents relating to  
17 microprocessor features.

18 231. Intel has been injured by the elimination of competition resulting from Fortress,  
19 Uniloc 2017, and VLSI's aggregation of patents in the Local Cache Management Patents Market.  
20 Specifically, by eliminating competition, this aggregation positioned Defendants to seek  
21 supracompetitive royalties that the prior patent holders were unable to seek because of the  
22 competitive constraints they faced. Because it has refused to capitulate to exorbitant royalty  
23 demands, Intel has been injured by Fortress and VLSI having targeted Intel as part of their  
24 litigation campaign based on these patents. Moreover, Apple and Intel have been injured as a  
25 result of the ongoing threat that Defendants will continue to assert patents in the Local Cache  
26

27 <sup>73</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 6:19-cv-00254 (W.D. Tex. Apr. 11, 2019), subsequently  
28 transferred as No. 1:19-cv-00977 (W.D. Tex.).

**REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED**

1 Management Patents Market against them.

2 232. The supracompetitive licensing returns Fortress's PAEs have sought are direct  
3 evidence of Defendants' market power and the anticompetitive effects that have resulted from their  
4 anticompetitive patent aggregation scheme. For example, VLSI has sought exorbitant royalties  
5 from Intel, even though the prior owners of the patents made no similar attempt to enforce the  
6 patents. Fortress (through its PAEs) has been able to acquire patents and then, through the benefit  
7 of its anticompetitive scheme, seek inflated royalties from licensees that reflect the competition  
8 that has been eliminated through Defendants' patent aggregation and far exceeds the actual value  
9 of the patents based on their technical and commercial merits.

10 233. Defendants' demands show that Fortress has the power to control prices in the  
11 Local Cache Management Patents Market. As detailed above, VLSI has sought billions of dollars  
12 from Intel.

13 **E. Shared Memory Access**

14 234. As another example, Defendants Fortress, the Uniloc Defendants, and VLSI have  
15 aggregated patents relating to shared memory access techniques. Shared memory access  
16 techniques provide a way for electronic devices or components thereof in which memory is shared  
17 by multiple processors to handle requests to access that shared memory. Specifically, when  
18 multiple requests are received simultaneously, shared memory access techniques are used to  
19 determine the order in which the requests are processed. Multi-processor electronic devices or  
20 components (such as a computer with multiple processors or a computer microprocessor  
21 containing multiple processing cores) in which the processors have shared access to any computer  
22 memory must use some protocol to handle multiple requests to that shared memory. There are no  
23 close substitutes for these techniques.

24 235. Defendants have aggregated patents in an antitrust market for patents purporting to  
25 cover shared memory access techniques, the "Shared Memory Access Patents Market." The  
26 Shared Memory Access Patents Market constitutes a relevant antitrust market where Fortress  
27 (either directly through its PAE subsidiaries or by acting in concert with the PAEs in which it  
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invests) and other holders of patents claimed to read on electronic devices or components thereof that support shared memory access capabilities compete with one another to license patents to suppliers of such devices.

236. Among the substitute patents Defendants have aggregated in the Shared Memory Access Patents Market are U.S. Patent No. 5,659,687, U.S. Patent No. 7,023,850, and U.S. Patent No. 7,606,983, all of which purport to cover alternative techniques to resolving multiple concurrent access requests for a shared memory.

237. U.S. Patent No. 5,659,687 (“the ’687 patent”) is titled “Device for Controlling Memory Data Path in Parallel Processing Computer System” and issued on August 19, 1997. According to its abstract, the ’687 patent relates to “[a] memory data path controller for a large-scale parallel processing computer system in which, when a network interface and bus interface request access to a single-port memory, a dual path controller dividedly stores memory access requests in network queue and bus queue.” It claims systems that arbitrate memory access requests present in a network queue and a bus queue depending on an assigned priority of the access sequence.

238. On its face, the ’687 patent is assigned to ETRI. On December 26, 2008, ETRI assigned one half of its interest in the ’687 patent to IPG Electronics 502. On April 10, 2012, ETRI and IPG Electronics 502 assigned the ’687 patent to Pendragon Electronics. On October 31, 2012, Pendragon Electronics assigned the ’687 patent to Phoenicia Innovations LLC (“Phoenicia”). And on January 31, 2018, Phoenicia assigned the ’687 patent to Defendant Uniloc Luxembourg, which then assigned the patent to Defendant Uniloc 2017 just a few months later, on May 3, 2018.

239. U.S. Patent No. 7,023,850 (“the ’850 patent”) is titled “Multicasting Apparatus and Method in Shared Memory Switch” and issued on April 4, 2006. According to its abstract, the ’850 patent relates to “[a] multicasting system and method for use in a shared memory-based switch . . . .” The ’850 patent is directed to techniques for shared memory access using input and output subqueues.

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1           240. On its face, the '850 patent is assigned to ETRI. On December 26, 2008, ETRI  
2 assigned one half of its interest in the '850 patent to IPG Electronics 502. On April 10, 2012,  
3 ETRI and IPG Electronics 502 assigned the '850 patent to Pendragon Electronics. On January 31,  
4 2018—the same day Phoenicia assigned the '687 patent to Defendant Uniloc Luxembourg—  
5 Pendragon Electronics assigned the '850 patent to Defendant Uniloc Luxembourg, which then  
6 assigned the patent to Defendant Uniloc 2017 on May 3, 2018.

7           241. U.S. Patent No. 7,606,983 (“the '983 patent”) is titled “Sequential Ordering of  
8 Transactions in Digital Systems with Multiple Requestors” and issued on October 20, 2009.  
9 According to its abstract, the '983 patent relates to “[a] digital system with an improved transaction  
10 ordering policy.” It claims systems for and methods of processing multiple access requests by a  
11 controller in a specific order, including by providing a way to resolve any contentions that occur  
12 when more than one access request is active at the same time.

13           242. On its face, the '983 patent is assigned to NXP B.V. On February 1, 2019, NXP  
14 B.V. assigned the '983 patent to Defendant VLSI.

15           243. Defendants’ aggregation of patents in the Shared Memory Access Patents Market  
16 (including at least three substitute patents) has reduced competition in that market, leading to  
17 inflated royalties and decreased licensing output. For example, the '687 patent purports to cover  
18 a priority-based arbitration method for handling multiple concurrent requests to access a shared  
19 memory. Meanwhile, the '850 patent purports to cover a method for handling multiple concurrent  
20 request to access a shared memory using input and output subqueues. Still further, the '983 patent  
21 purports to cover a method for handling multiple concurrent requests to access a shared memory  
22 using a controller to place the requests in a sequential order. These three approaches for handling  
23 concurrent access requests—priority-based arbitration, input and output subqueues, and sequential  
24 ordering—are substitutes for one another. When the '687, '850, and '983 patents were owned by  
25 different entities, a party wishing to use one of these potential substitute technologies would be  
26 able to take advantage of competition between the owners of these patents when attempting to  
27 secure a license. But because of Defendants’ unlawful aggregation of patents, Defendants now  
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1 control each of the substitute technologies, eliminating such competition.

2       244. That lessening of competition is reflected by the evidence of supracompetitive  
3 royalties sought by Defendants. Whereas the prior owners of the '687 patent (ETRI and IPG  
4 Electronics 502, then Pendragon Electronics, then Phoenicia), and the '850 patent (ETRI and IPG  
5 Electronics 502, then Pendragon Electronics), and the '983 patent (NXP B.V.) never asserted these  
6 patents because of the competitive constraints they faced, Defendant VLSI has pursued a lawsuit  
7 involving the '983 patent.

8       245. Intel has been injured by the elimination of competition resulting from Defendants'  
9 aggregation of patents in the Shared Memory Access Patents Market. Specifically, this  
10 aggregation positioned Fortress and VLSI to seek supracompetitive royalties that the prior patent  
11 holders were unable to seek because of the competitive constraints they faced. Because it has  
12 refused to capitulate the exorbitant royalty demands, Intel has been injured by VLSI having  
13 targeted Intel for enforcement of the '983 patent. Moreover, Apple and Intel have been injured as  
14 a result of the ongoing threat that Defendants will continue to assert patents in the Shared Memory  
15 Access Patents Market against them.

16       246. As described above, Defendant VLSI filed suit against Intel on March 1, 2019  
17 asserting the '983 patent and five other patents.<sup>74</sup> Just over a month later, on April 11, 2019, VLSI  
18 voluntarily dismissed the suit and re-filed three actions in the Western District of Texas, across  
19 which it asserted eight patents, including the '983 patent.<sup>75</sup> In its complaints, Defendant VLSI  
20 alleged that an interconnect protocol called Quick Path Interconnect that is contained in certain  
21 Intel microprocessors infringes the '983 patent.

22       247. Intel sought VLSI's permission to disclose (under seal) the damages it claims for  
23 Intel's alleged infringement of the '983 patent, as well as the financial terms of its purchase of the  
24 patent from NXP; however, VLSI refused that consent. The damages estimates VLSI has  
25

26 <sup>74</sup> *VLSI Technology LLC v. Intel Corp.*, No. 1:19-cv-00426 (D. Del. Mar. 1, 2019).

27 <sup>75</sup> *VLSI Technology LLC v. Intel Corp.*, No. 6:19-cv-00256 (W.D. Tex. Apr. 11, 2019),  
28 subsequently consolidated under No. 6:19-cv-00254 (W.D. Tex.) and transferred as No. 1:19-cv-00977 (W.D. Tex.).

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disclosed publicly in connection with its assertion of other patents obtained from the same prior owner against Intel have been exorbitant—as discussed above, VLSI disclosed that it would seek \$7.1 billion in a suit against Intel involving eight patents and billions in a suit against Intel involving five patents. This amount is significantly more than NXP has sought for other of its patents concerning microprocessor features. Specifically, in January 2014, [REDACTED], for example, U.S. Patent Nos. 7,500,126 (Arrangement and Method for Controlling Power Modes of Hardware Resources); 6,748,472 (Method and System for an Interrupt Accelerator that Reduces the Number of Interrupts for a Digital Signal Processor); 7,102,382 (Digital Electronic Circuit with Low Power Consumption); and 8,181,054 (Arrangement and Method for Controlling Power Modes of Hardware Resources). In December 2014, [REDACTED], for example, U.S. Patent Nos. 9,032,124 (Definition of Wakeup Bus Messages for Partial Networking); 6,664,821 (Line Driver with Current Source Output and Low Sensitivity to Load Variations); 8,407,339 (Star Network and Method for Preventing a Repeated Transmission of a Control Symbol in such a Star Network); 7,620,135 (Data Processing Apparatus that Identifies a Communication Clock Frequency); and 8,527,738 (Flexray System Using Efficient Storage of Instructions). And in December 2014, [REDACTED], including for example: U.S. Patent Nos. 9,939,141 (Active Thermal Management Device and Thermal Management Method); 9,078,318 (Switched Mode Power Converter and Method of Operating the Same); 9,036,375 (Controller that Determines Average Output Current of a Switching Circuit); 8,120,289 (Optical Electrical System in Package for LED Based Lighting System); and 7,688,600 (Multi-Resonance Converter).

248. The supracompetitive licensing returns Fortress’s PAEs have sought are evidence of Defendants’ market power and the anticompetitive effects that have resulted from their anticompetitive patent aggregation scheme. For example, VLSI has sought exorbitant royalties from Intel, even though the prior owners of the patents made no similar attempt to enforce the

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1 patents. Fortress (through its PAEs) has been able to acquire patents and then, through the benefit  
2 of its anticompetitive scheme, seek inflated royalties from licensees that reflect the competition  
3 that has been eliminated through Defendants' patent aggregation and far exceeds the actual value  
4 of the patents based on their technical and commercial merits.

5 249. Defendants' demand also shows that Fortress has the power to control prices in the  
6 Shared Memory Access Patents Market. As detailed above, VLSI has sought billions of dollars  
7 from Intel in connection with the assertion of other patents VLSI obtained from the same prior  
8 owner.

**F. Device Authorization**

9  
10 250. As another example, Fortress, the Uniloc Defendants, INVT, VLSI, Seven  
11 Networks, and IXI IP have aggregated patents that purport to cover ways to handle device  
12 authorization. Device authorization is a means to restrict access in a computer network to only  
13 authorized, trusted devices. Device authorization is commonly used in computer networks to  
14 protect data integrity and security, and there is no close substitute for device authorization  
15 techniques.

16 251. Fortress, the Uniloc Defendants, INVT, VLSI, Seven Networks, and IXI IP have  
17 aggregated patents in an antitrust market for patents purporting to cover device authorization  
18 capabilities, the "Device Authorization Patents Market." The Device Authorization Patents  
19 Market constitutes a relevant antitrust market where Fortress (either directly through its PAE  
20 subsidiaries or by acting in concert with the PAEs in which it invests) and other holders of patents  
21 claimed to read on electronic devices that support device authorization capabilities compete with  
22 one another to license patents to suppliers of such devices and supporting software.

23 252. Among the substitute patents Defendants have aggregated in the Device  
24 Authorization Patents Market is U.S. Patent No. 7,900,242, U.S. Patent No. 7,917,620, U.S. Patent  
25 No. 9,094,395, U.S. Patent No. 6,212,633, U.S. Patent No. 8,838,976, U.S. Patent No. 8,213,907,  
26 U.S. Patent No. 6,856,616, U.S. Patent No. 7,039,033, and U.S. Patent No. 7,295,532, all of which  
27 purport to cover alternative techniques to restrict access to network resources in a computer  
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1 network.

2 253. U.S. Patent No. 7,900,242 (“the ’242 patent”) is titled “Modular Authentication and  
3 Authorization Scheme for Internet Protocol” and issued on March 1, 2011. According to its  
4 abstract, the ’242 patent relates to “[a] system and method for three-party authentication and  
5 authorization” for Internet Protocol version 6. Its claims are directed to a three-party device  
6 authorization scheme.

7 254. On its face, the ’242 patent is assigned to Nokia Corporation (“Nokia”). On June 9,  
8 2014, Nokia assigned the ’242 patent to Inventergy. On October 1, 2014, Inventergy conveyed a  
9 security interest in the ’242 patent to DBD Credit Funding LLC, a Fortress affiliate. On April 27,  
10 2017, Inventergy assigned the ’242 patent to INVT.

11 255. U.S. Patent No. 7,917,620 (“the ’620 patent”) is titled “Communication System”  
12 and issued on March 29, 2011. According to its abstract, the ’620 patent relates to “[a] security  
13 server for use in a telecommunications network [that] is arranged to receive a message; determine  
14 whether the message is from a known source or an unknown source and, depending on the result  
15 of the determination, modify the message; and forward the message within the telecommunications  
16 network.” Its claims are directed to a technique for device authorization using a telecom security  
17 server.

18 256. On its face, the ’620 patent is assigned to Nokia. On June 9, 2014, Nokia assigned  
19 the ’620 patent to Inventergy. On October 1, 2014, Inventergy conveyed a security interest in the  
20 ’620 patent to DBD Credit Funding LLC, a Fortress affiliate. On April 27, 2017, Inventergy  
21 assigned the ’620 patent to INVT.

22 257. U.S. Patent No. 9,094,395 (“the ’395 patent”) is titled “Secure Mechanism to  
23 Deliver Mobile Traffic Management Configuration upon Stub Activation on a Mobile Device of a  
24 Global Service Discovery Server” and issued on July 28, 2015. According to its abstract, the ’395  
25 patent relates to “[a] system, a network, and a mobile device . . . in which the mobile device  
26 includes an embedded stub that interacts with a global service discovery server to obtain  
27 information about an operating server that handles communications from the mobile device.” Its  
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1 claims are directed to a technique for device authorization using a global service discovery server.

2 258. On its face, the '395 patent is assigned to Seven Networks, Inc. As described above,  
3 Fortress gained control of Seven Networks, Inc. in 2015 and thereafter converted it to a limited  
4 liability company (that is, Defendant Seven Networks). This conversion was executed on July 14,  
5 2015.

6 259. U.S. Patent No. 6,212,633 ("the '633 patent") is titled "Secure Data  
7 Communication over a Memory-mapped Serial Communications Interface Utilizing a Distributed  
8 Firewall" and issued on April 3, 2001. According to its abstract, the '633 patent relates to "[a]  
9 distributed firewall [that] is utilized in conjunction with a memory-mapped serial communications  
10 interface such as that defined by the IEEE 1394 specification to permit secure data transmission  
11 between selected nodes over the interface." Its claims are directed to a distributed firewall that  
12 restricts access to selected nodes to only authorized entities.

13 260. On its face, the '633 patent is assigned to VLSI Technology, Inc. A name change  
14 from VLSI Technology, Inc. to Philips Semiconductors VLSI Inc. was executed on July 2, 1999,  
15 and a name change from Philips Semiconductors VLSI Inc. to Philips Semiconductors Inc.  
16 ("Philips Semiconductors") was executed on December 20, 1999. On September 28, 2006, Philips  
17 assigned the '633 patent to Philips Semiconductors International B.V. A name change from  
18 Philips Semiconductors International B.V. to NXP B.V. was executed on September 29, 2006. On  
19 December 4, 2017, NXP B.V. assigned the '633 patent to VLSI Technology LLC.

20 261. U.S. Patent No. 8,838,976 ("the '976 patent") is titled "Web Content Access Using  
21 a Client Device Identifier" and issued on September 16, 2014. According to its abstract, the '976  
22 patent relates to "[s]ystems and methods . . . for controlling access to online services." The '976  
23 patent is directed to techniques for generating a hardware device identifier that can be used to  
24 authenticate the user.

25 262. On its face, the '976 patent is assigned to Uniloc Luxembourg. On January 2, 2013,  
26 Uniloc Luxembourg assigned the '976 patent to NetAuthority, Inc. ("NetAuthority"). On July 23,  
27 2013, NetAuthority assigned the '976 patent back to Uniloc Luxembourg. On December 30, 2014,  
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1 Uniloc Luxembourg conveyed a security interest in the '976 patent to Fortress Credit. On May 3,  
2 2018, Uniloc Luxembourg assigned the '976 patent to Uniloc 2017.

3 263. U.S. Patent No. 8,213,907 ("the '907 patent") is titled "System and Method for  
4 Secured Mobile Communication" and issued on July 3, 2012. According to its abstract, the '907  
5 patent relates to "[a] method [to] achieve[] mobile communications by authenticating a mobile  
6 device seeking communication with a secure server." The '907 patent is directed to device  
7 authentication techniques using a digital fingerprint.

8 264. On its face, the '907 patent is assigned to Uniloc Luxembourg. On January 2, 2013,  
9 Uniloc Luxembourg assigned the '907 patent to NetAuthority. On August 27, 2013, NetAuthority  
10 assigned the '907 patent back to Uniloc Luxembourg. On December 30, 2014, Uniloc  
11 Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA, Inc. conveyed a security interest  
12 in the '907 patent to Fortress Credit. Uniloc Luxembourg assigned its interest in the '907 patent  
13 to Uniloc 2017 on May 3, 2018.

14 265. U.S. Patent No. 6,856,616 ("the '616 patent") is titled "System and Method for  
15 Providing Service Provider Configurations for Telephones Using a Central Server in a Data  
16 Network Telephony System" and issued on February 15, 2005. According to its abstract, the '616  
17 patent relates to "[a] system and method for providing service provider configured telephone  
18 service to a user of a data network telephone." The '616 patent is directed to methods for a device  
19 to identify itself to a server and receive configuration data based on that identity.

20 266. On its face, the '616 patent is assigned to 3Com Corp. On April 28, 2010, in  
21 connection with a merger, 3Com Corp. assigned the '616 patent to HP. Effective October 10,  
22 2011, HP assigned the '616 patent to HP Development, and on October 27, 2015, HP Development  
23 assigned the '616 patent to HP Enterprise Development. On May 16, 2017, HP Enterprise  
24 Development assigned the '616 patent to Uniloc Luxembourg. On May 3, 2018, Uniloc  
25 Luxembourg assigned the '616 patent to Uniloc 2017.

26 267. U.S. Patent No. 7,039,033 ("the '033 patent") is titled "System, Device and  
27 Computer Readable Medium for Providing a Managed Wireless Network Using Short-range Radio  
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1 Signals” and issued on May 2, 2006. According to its abstract, the ’033 patent relates to “[a]  
2 system, a wireless hand-held device, and software component for accessing information responsive  
3 to short-range radio signals.” Its claims are directed to techniques for authorizing a device to  
4 receive network services based on its IP address by translating its IP address using another device.

5 268. On its face, the ’033 patent is assigned to IXI Mobile (Israel) Ltd. On November  
6 28, 2001, a change of name was executed from IXI Mobile (Israel) Ltd. to IXI R&D. On June 5,  
7 2014, IXI R&D assigned the ’033 patent to IXI IP. That same day, IXI IP conveyed a security  
8 interest in the ’033 patent to Fortress Credit. On September 11, 2014, Fortress Credit Co. DBD  
9 LLC assigned its interest in the ’033 patent to FCO V CLO Transferor LLC, another Fortress  
10 subsidiary.

11 269. U.S. Patent No. 7,295,532 (“the ’532 patent”) is titled “System, Device and  
12 Computer Readable Medium for Providing Networking Services on a Mobile Device” and issued  
13 on November 13, 2007. According to its abstract, the ’532 patent relates to “[a] system, device  
14 and computer readable medium that monitors and reconfigures a LAN by a WAN operator.” Its  
15 claims, like those of the ’033 patent, are directed to techniques for authorizing a device to receive  
16 network services based on its IP address by translating its IP address using another device.

17 270. On its face, the ’532 patent is assigned to IXI R&D. On June 5, 2014, IXI R&D  
18 assigned the ’532 patent to IXI IP. That same day, IXI IP conveyed a security interest in the ’532  
19 patent to Fortress Credit. On September 11, 2014, Fortress Credit Co. DBD LLC assigned its  
20 interest in the ’532 patent to FCO V CLO Transferor LLC.

21 271. In addition to the patents discussed immediately above, which are substitutes for  
22 one another, the Uniloc Defendants have several additional patents directed to device authorization  
23 that are at least complements to, and possibly substitutes for, the ’242 patent, the ’620 patent, the  
24 ’395 patent, the ’633 patent, the ’976 patent, the ’907 patent, the ’616 patent, the ’033 patent, and  
25 the ’532 patent.

26 272. U.S. Patent No. 8,316,421 (“the ’421 patent”) is titled “System and Method for  
27 Device Authentication with Built-in Tolerance” and issued on November 20, 2012. According to  
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1 its abstract, the '421 patent relates to “[a] system for building tolerance into authentication of a  
2 computing device.” On its face, the '421 patent is assigned to Uniloc Luxembourg. On January 2,  
3 2013, Uniloc Luxembourg assigned the '421 patent to NetAuthority. On August 27, 2013,  
4 NetAuthority assigned the '421 patent back to Uniloc Luxembourg. On December 30, 2014,  
5 Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA, Inc. conveyed a security  
6 interest in the '421 patent to Fortress Credit. Uniloc Luxembourg assigned its interest in the '421  
7 patent to Uniloc 2017 on May 3, 2018.

8 273. U.S. Patent No. 7,987,362 (“the '362 patent”) is titled “Method and Apparatus for  
9 Using Imperfections in Computing Devices for Device Authentication” and issued on July 26,  
10 2011. According to its abstract, the '362 patent relates to “[a] method for authenticating a device  
11 including the steps of operating the device to create at least one failure condition; obtaining a  
12 measurement based on at least one failure condition; and, comparing the measurement based on  
13 the at least one failure condition with a previously stored measurement based on the at least one  
14 failure condition to determine an identity of the device. An apparatus and an article of manufacture  
15 for authenticating a device is also disclosed.” On its face, the '362 patent is assigned to Uniloc  
16 USA. On May 25, 2012, Uniloc USA assigned the '362 patent to Uniloc Luxembourg. On  
17 January 2, 2013, Uniloc Luxembourg assigned the '362 patent to NetAuthority. On July 23, 2013,  
18 NetAuthority assigned the '362 patent back to Uniloc Luxembourg. On December 30, 2014,  
19 Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA conveyed a security  
20 interest in the '362 patent to Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the  
21 '362 patent to Uniloc 2017.

22 274. U.S. Patent No. 9,286,466 (“the '466 patent”) is titled “Registration and  
23 Authentication of Computing Devices Using a Digital Skeleton Key” and issued on March 15,  
24 2016. According to its abstract, the '466 patent relates to “[a] method for registering a computing  
25 device to a user account using at least one user-selected fingerprintable device externally  
26 accessible to the computing device including transmitting a registration information request to the  
27 computing device, receiving at least one device fingerprint of the at least one user-selected  
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1 fingerprintable device accessible by the computing device, and primary identification data of the  
2 computing device, generating a skeleton key, recording the primary identification data, and  
3 associating the skeleton key and the primary identification data with the user account.” On its  
4 face, the ’466 patent is assigned to Uniloc Luxembourg. Upon issuance, the ’466 patent was  
5 subject to the December 2014 security interest Uniloc Luxembourg conveyed to Fortress Credit.  
6 On May 3, 2018, Uniloc Luxembourg assigned the ’466 patent to Uniloc 2017.

7 275. U.S. Patent No. 7,934,250 (“the ’250 patent”) is titled “Method and Apparatus for  
8 Using Performance and Stress Testing on Computing Devices for Device Authentication” and  
9 issued on April 26, 2011. According to its abstract, the ’250 patent relates to “[a] method for  
10 authenticating a device including the steps of measuring at least one performance parameter of the  
11 device to obtain a measurement; and comparing the measurement of the at least one performance  
12 parameter with a previously stored measurement of the at least one performance parameter to  
13 determine an identity of the device. An apparatus and an article of manufacture for authenticating  
14 a device is also disclosed.” On its face, the ’250 patent is assigned to Uniloc USA. On May 25,  
15 2012, Uniloc USA assigned the ’250 patent to Uniloc Luxembourg. On January 2, 2013, Uniloc  
16 Luxembourg assigned the ’250 patent to NetAuthority. On July 23, 2013, NetAuthority assigned  
17 the ’250 patent back to Uniloc Luxembourg. On December 30, 2014, Uniloc Luxembourg, Uniloc  
18 Corporation PTY Limited, and Uniloc USA conveyed a security interest in the ’250 patent to  
19 Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the ’250 patent to Uniloc 2017.

20 276. U.S. Patent No. 9,578,502 (“the ’502 patent”) is titled “Device Authentication  
21 Using Inter-person Message Metadata” and issued on February 21, 2017. According to its abstract,  
22 the ’502 patent relates to “[a] device authentication server [that] authenticates a remotely located  
23 device using unique data associated with the user of the device stored on a remotely located server  
24 that has an established relationship with the device, such as client logic installed on the device and  
25 authentication data of the user stored on the device,” where “[t]he unique data can be unique  
26 metadata associated with inter-person messages.” On its face, the ’502 patent is assigned to Uniloc  
27 Luxembourg. Upon issuance, the ’502 patent was subject to the December 2014 security interest  
28

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Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA conveyed to Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the '502 patent to Uniloc 2017.

277. U.S. Patent No. 8,695,068 ("the '068 patent") is titled "Device Authentication Using Display Device Irregularity" and issued on April 8, 2014. According to its abstract, the '068 patent relates to "[a] device authentication server [that] authenticates a remotely located device using data representing pixel irregularities of a display of the device." On its face, the '068 patent is assigned to Uniloc Luxembourg. On December 30, 2014, Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA conveyed a security interest in the '068 patent to Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the '068 patent to Uniloc 2017.

278. U.S. Patent No. 9,143,496 ("the '496 patent") is titled "Device Authentication Using Device Environment Information" and issued on September 22, 2015. According to its abstract, the '496 patent relates to "[a] device authentication server [that] authenticates a remotely located device using a detailed history of movement of the device." On its face, the '496 patent is assigned to Uniloc Luxembourg. Upon issuance, the '496 patent was subject to the December 2014 security interest Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA conveyed to Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the '496 patent to Uniloc 2017.

279. U.S. Patent No. 8,881,280 ("the '280 patent") is titled "Device-specific Content Delivery" and issued on November 4, 2014. According to its abstract, the '280 patent relates to the protection of devices within a user's "device-sphere," in which "[d]evices of an individual's device-sphere recognize risky or undesirable behavior requested by devices outside of the device-sphere and allow the user to prevent the behavior. The user's decision is stored and used to protect all devices of the user's device-sphere from similar risky behavior from the outside devices." On its face, the '280 patent is assigned to Uniloc Luxembourg. On December 30, 2014, Uniloc Luxembourg, Uniloc Corporation PTY Limited, and Uniloc USA conveyed a security interest in the '280 patent to Fortress Credit. On May 3, 2018, Uniloc Luxembourg assigned the '280 patent to Uniloc 2017.



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280. Defendants’ aggregation of patents in the Device Authorization Patents Market (including at least nine substitute patents and eight complementary and/or substitute patents) has reduced competition in that market, leading to inflated royalties and decreased licensing output. For example, the ’907 patent purports to cover a method of granting access privileges to a mobile device based on a “digital fingerprint” of that device. Defendants have also asserted that the ’616 patent covers a method of granting access privileges to a mobile device based on that device’s “part number” and a configuration associated therewith. Using digital fingerprints to grant access privileges to a mobile device is a substitute for using a part number, and vice versa. When the ’907 and ’616 patents were owned by different entities, a party wishing to use one of these potential substitute technologies would be able to take advantage of competition between the owners of these patents when attempting to secure a license. But because of Defendants’ unlawful aggregation of patents, Defendants now control both substitute technologies, making such competition impossible.

281. That lessening of competition is reflected by the evidence of supracompetitive royalties sought by Defendants. Whereas the prior owners of the ’633 patent, the ’616 patent, the ’033 patent, and the ’532 patent never asserted them because of the competitive constraints they faced, VLSI, the Uniloc Defendants, and IXI IP have pursued litigation based on these patents.

282. On June 28, 2018, VLSI, under the control of Fortress, sued Intel in the District of Delaware, claiming that Intel products using Intel On-Chip System Fabric, including various Intel chipsets, infringe the ’633 patent.<sup>76</sup> VLSI also asserted four additional patents. A year into the case, VLSI stated that its damages claim would be for billions of dollars. In January 2020, following an unfavorable claim construction ruling, and pursuant to the Court’s order requiring election of a reduced number of patent claims across the case, VLSI elected claims from the other four patents but none from the ’633 patent.

283. On April 3, 2017, Uniloc USA and Uniloc Luxembourg, under the control of

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<sup>76</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 1:18-cv-00966 (D. Del. Jan. 28, 2018).

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Fortress, sued Apple in the Eastern District of Texas, claiming that mobile devices such as iPhones that use software that incorporates Apple’s “Frequent Locations” feature infringe the ’976 patent.<sup>77</sup> Defendants Uniloc USA and Uniloc Luxembourg also accused Apple of infringing two additional patents. The case was transferred to the Northern District of California, and the plaintiffs ultimately voluntarily dismissed the ’976 patent from the case.

284. On October 8, 2018, Uniloc 2017, under the control of Fortress, sued Apple in the Western District of Texas, claiming that mobile devices such as iPhones, iPads, and Apple Watches that include telephone functionality infringe the ’616 patent because the patent allegedly covers method of granting access privileges to a mobile device based on that device’s “part number” and a configuration associated therewith.<sup>78</sup> Uniloc 2017 voluntarily dismissed the case just over a month later. That same day, Uniloc 2017 filed another case again alleging that the same Apple devices infringe the ’616 patent.<sup>79</sup> The case has been transferred to the Northern District of California, where it is currently pending. Uniloc 2017’s estimated damages for Apple’s alleged infringement of the ’616 patent are \$2 per allegedly infringing device, which Uniloc 2017 claims is in the hundreds of millions and therefore yields a damages claim in the hundreds of millions of dollars.

285. Less than two weeks after IXI IP conveyed security interests in the ’033 and ’532 patents to Fortress Credit, IXI IP began to sue companies based on the patents. In 2014, IXI IP brought three lawsuits, asserting the same four patents in each case, including the ’033 and ’532 patents:

- *IXI Mobile (R&D) Ltd. et al. v. Samsung Electronics Co., Ltd. et al.*, No. 1:14-cv-04355 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03752 (N.D. Cal.) (HSG);
- *IXI Mobile (R&D) Ltd. et al. v. Blackberry Limited et al.*, No. 1:14-cv-04428 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03754 (N.D. Cal.) (HSG); and

<sup>77</sup> *Uniloc USA, Inc. v. Apple Inc.*, No. 2:17-cv-00258 (E.D. Tex. Apr. 3, 2017).

<sup>78</sup> *Uniloc 2017 LLC v. Apple Inc.*, No. 1:18-cv-00851 (W.D. Tex. Oct. 8, 2018).

<sup>79</sup> *Uniloc 2017 LLC v. Apple Inc.*, No. 1:18-cv-00989 (W.D. Tex. Nov. 18, 2018), subsequently transferred as No. 3:19-cv-01905 (N.D. Cal.) (JD).

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- *IXI Mobile (R&D) Ltd. et al. v. Apple, Inc.*, No. 1:14-cv-07954 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03755 (N.D. Cal.) (HSG).

286. In June 2015, Apple and Samsung filed petitions for *inter partes* review, challenging the validity of each asserted claim of the patents at issue. In November 2015, the Court stayed the litigations pending *inter partes* review. The PTAB instituted review of all challenged claims of the '033 patent and all but one challenged claim of the '532 patent.<sup>80</sup> In December 2016, the PTAB found all instituted claims unpatentable.<sup>81</sup> Additional details regarding IXI IPs efforts to obtain additional claims through reexamination for assertion in the litigation against Apple are discussed in paragraphs 113-117 above. Ultimately, the actions were dismissed following joint stipulations of dismissal without prejudice.

287. Intel and Apple have been injured by the elimination of competition resulting from Defendants' aggregation of patents in the Device Authorization Patents Market. Specifically, by eliminating competition, this aggregation positioned Defendants to seek supracompetitive royalties that the prior patent holders were unable to seek because of the competitive constraints they faced. Because they have refused to capitulate to exorbitant royalty demands, Intel and Apple have been injured by Fortress, VLSI, the Uniloc Defendants, and IXI IP having targeted Intel and Apple as part of their litigation based on these patents. Moreover, Apple and Intel have been injured as a result of the ongoing threat that Defendants will continue to assert patents in the Device Authorization Patents Market against them.

288. The supracompetitive licensing returns Fortress's PAEs have sought are direct evidence of Defendants' market power and the anticompetitive effects that have resulted from their anticompetitive patent aggregation scheme. For example, VLSI has sought exorbitant royalties of

<sup>80</sup> *Samsung Elecs. v. IXI IP, LLC*, IPR2015-01444, Paper No. 8 (PTAB Dec. 30, 2015); *Samsung Elecs. v. IXI IP, LLC*, IPR2015-01443, Paper No. 8 (PTAB Dec. 30, 2015). In response to a separate petition from Apple and Samsung to review claims of the '532 patent—claims that, except for one, the PTAB ultimately found unpatentable in IPR2015-01443 based on different unpatentability grounds—the PTAB denied instituting *inter partes* review. *See Samsung Elecs. v. IXI IP, LLC*, IPR2015-01442, Paper No. 8 (PTAB Dec. 30, 2015).

<sup>81</sup> *Samsung Elecs. v. IXI IP, LLC*, IPR2015-01444, Paper No. 27 (PTAB Dec. 21, 2016); *Samsung Elecs. v. IXI IP, LLC*, IPR2015-01443, Paper No. 27 (PTAB Dec. 21, 2016).

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1 Intel, even though the prior owners of the patents made no similar attempt to enforce the patents.  
2 Fortress (through its PAEs) has been able to acquire patents and then, through the benefit of its  
3 anticompetitive scheme, seek inflated royalties from licensees that reflect the competition that has  
4 been eliminated through Defendants' patent aggregation and far exceeds the actual value of the  
5 patents based on their technical and commercial merits.

6 289. Defendants' demands show that Fortress has the power to control prices in the  
7 Device Authorization Patents Market. As detailed above, Fortress-controlled VLSI has sought  
8 billions of dollars from Intel and Fortress-controlled Uniloc 2017 has sought hundreds of millions  
9 of dollars from Apple.

**G. Health Monitoring**

10  
11 290. As another example, Fortress and the Uniloc Defendants have aggregated patents  
12 relating to health monitoring. Health monitoring enables certain electronic devices, such as  
13 wearable devices, smartphones, medical devices, or the like, to monitor and process patient data  
14 from sensors. Health monitoring sensors are commonly used in such electronic devices, and there  
15 is no close substitute for the functionality.

16 291. Fortress and the Uniloc Defendants have aggregated patents in an antitrust market  
17 for patents purporting to cover health monitoring capabilities, the "Health Monitoring Patents  
18 Market." The Health Monitoring Patents Market constitutes a relevant antitrust market where  
19 Fortress (either directly through its PAE subsidiaries or by acting in concert with the PAEs in  
20 which it invests) and other holders of patents claimed to read on electronic devices that support  
21 health monitoring capabilities compete with one another to license patents to suppliers of such  
22 devices and supporting software.

23 292. Among the substitute patents Defendants have aggregated in the Health Monitoring  
24 Patents Market are U.S. Patent No. 7,220,220, U.S. Patent No. 6,736,759, and U.S. Patent No.  
25 6,215,403, all of which purport to cover alternative techniques to process patient physiological  
26 data received from health monitoring sensors.

27 293. U.S. Patent No. 7,220,220 ("the '220 patent") is titled "Exercise Monitoring System  
28

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1 and Methods” and issued on May 22, 2007. According to its abstract, the ’220 patent relates to  
2 “[a]n exercise monitoring system which includes an electronic positioning device; a physiological  
3 monitor; and a display unit configured for displaying data provided by said electronic positioning  
4 device and said physiological monitor.” It claims methods for monitoring and reporting health  
5 conditions and/or physiological parameters.

6 294. On June 9, 2017, inventors Kevin Schwieger and Jack Stubbs assigned the ’220  
7 patent to Red Dragon Innovations LLC (“Red Dragon”). On July 28, 2017, the same inventors  
8 assigned the ’220 patent to Paragon Solutions LLC (“Paragon Solutions”), which, that same day,  
9 assigned it to Red Dragon. On August 10, 2017, Red Dragon assigned the ’220 patent to Defendant  
10 Uniloc Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg assigned the ’220 patent  
11 to Defendant Uniloc 2017.

12 295. U.S. Patent No. 6,736,759 (“the ’759 patent”) is in the same patent family as the  
13 ’220 patent, is also titled “Exercise Monitoring System and Methods,” and issued on May 18,  
14 2004. Similar to the ’220 patent, the ’759 patent relates to systems for monitoring and reporting  
15 health conditions and/or physiological parameters.

16 296. The ’759 patent is assigned on its face to Paragon Solutions. Pursuant to  
17 assignments dated June 9, 2017 and July 28, 2017, Paragon Solutions assigned the ’759 patent to  
18 Red Dragon. On August 10, 2017, Red Dragon assigned the ’759 patent to Defendant Uniloc  
19 Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg assigned the ’759 patent to  
20 Defendant Uniloc 2017.

21 297. U.S. Patent No. 6,215,403 (“the ’403 patent”) is titled “Wireless Monitoring  
22 System” and issued on April 10, 2001. According to its abstract, the ’403 patent relates to “a  
23 detection device capable of being coupled to a person for remotely monitoring heart and respiratory  
24 functions.” It claims a system for monitoring physiological parameters and providing an alert  
25 under certain conditions.

26 298. On its face, the ’403 patent is assigned to IBM. On September 26, 2007, IBM  
27 assigned the ’403 patent to IPG Healthcare 501 Limited (“IPG Healthcare”). On April 10, 2012,  
28

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1 IPG Healthcare assigned the '403 patent to Pendragon Networks LLC ("Pendragon Networks").  
2 On January 31, 2018, Pendragon Networks assigned the '403 patent to Defendant Uniloc  
3 Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg assigned the '403 patent to Uniloc  
4 2017 LLC.

5 299. In addition to the patents discussed immediately above, which are substitutes for  
6 one another, the Uniloc Defendants have several additional patents directed to health monitoring  
7 that are at least complements to, and possibly substitutes for, the '220 patent, the '759 patent, and  
8 the '403 patent.

9 300. U.S. Patent No. 7,653,508 ("the '508 patent") is titled "Human Activity Monitoring  
10 Device" and issued on January 26, 2010. According to its abstract, the '508 patent relates to "[a]  
11 method for monitoring human activity using an inertial sensor . . . ."

12 301. U.S. Patent No. 7,690,556 ("the '556 patent") is titled "Step Counter Accounting  
13 for Incline" and issued on April 6, 2010. According to its abstract, the '556 patent relates to a step  
14 counter system that comprises an accelerometer, step calculation logic, and incline logic.

15 302. U.S. Patent No. 7,881,902 ("the '902 patent") is titled "Human Activity Monitoring  
16 Device" and issued on February 1, 2011. According to its abstract, the '902 patent relates to "[a]  
17 method for monitoring human activity using an inertial sensor . . . ."

18 303. U.S. Patent No. 8,712,723 ("the '2723 patent") is titled "Human Activity  
19 Monitoring Device" and issued on April 29, 2014. According to its abstract, the '2723 patent  
20 relates to "[a] method for monitoring human activity using an inertial sensor . . . ."

21 304. U.S. Patent No. 8,872,646 ("the '646 patent") is titled "Method and System for  
22 Waking up a Device Due to Motion" and issued on October 28, 2014. According to its abstract,  
23 the '646 patent relates to "waking up [a device in an idle state] when the analysis of the motion  
24 indicates a change in the dominant axis of the device and/or a level of acceleration beyond a  
25 threshold."

26 305. The '508 patent, the '556 patent, the '902 patent, the '2723 patent, and the '646  
27 patent are collectively referred to as the "DP Technologies Patents." The DP Technologies Patents  
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1 are directed to techniques for monitoring human activity using inertial sensors to detect physical  
2 motion (e.g., steps).

3 306. On their faces, the DP Technologies Patents are assigned to DP Technologies, Inc.  
4 (“DP Technologies”). On May 17, 2017, DP Technologies assigned the DP Technologies Patents  
5 to Uniloc Luxembourg. On May 3, 2018, Uniloc Luxembourg assigned the DP Technologies  
6 Patents, except for the ’646 patent, to Uniloc 2017.

7 307. Defendants’ aggregation of patents in the Health Monitoring Patents Market  
8 (including at least three substitute patents and five complementary and/or substitute patents) has  
9 reduced competition in that market, leading to inflated royalties and decreased licensing output.  
10 For example, the ’220 and ’403 patents each purport to cover techniques for processing patient  
11 physiological data received from a health monitoring sensor. Specifically, the ’220 patent purports  
12 to cover a display-driven method in which the physiological parameters are displayed to a user,  
13 whereas the ’403 patent discloses an alert-driven method in which alerts are generated in response  
14 to events associated with the physiological parameters. These display-driven and alert-driven  
15 means for processing patient physiological data are substitutes for one another. When the ’220 and  
16 ’403 patents were owned by different entities, a party wishing to use one of these potential  
17 substitute technologies would be able to take advantage of competition between the owners of  
18 these patents when attempting to secure a license. But because of Defendants’ unlawful  
19 aggregation of patents, Defendants now control each of the substitute technologies, eliminating  
20 such competition.

21 308. That lessening of competition is reflected by the evidence of supracompetitive  
22 royalties demanded and received by Defendants. Defendants have pursued numerous assertions  
23 and secured at least four settlements for substantial royalties.

24 309. Specifically, Uniloc Luxembourg and Uniloc USA and later Uniloc 2017, all under  
25 the control of Fortress, began a litigation campaign in 2017 based on the DP Technologies Patents.  
26 Between June 2017 and November 2017, Uniloc Luxembourg and Uniloc USA asserted at least  
27 one of the DP Technologies Patents in thirteen lawsuits:  
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- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00470 (E.D. Tex.), subsequently transferred as No. 4:18-cv-00362 (N.D. Cal.) (PJH);
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00469 (E.D. Tex.), subsequently transferred as No. 4:18-cv-00361 (N.D. Cal.) (PJH);
- *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00522 (E.D. Tex.), subsequently transferred as No. 4:18-cv-00364 (N.D. Cal.) (PJH);
- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:17-cv-00652 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:17-cv-00651 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:17-cv-00650 (E.D. Tex.);
- *Uniloc USA Inc et al. v. LG Electronics U.S.A., Inc. et al.*, No. 4:17-cv-00830 (N.D. Tex.);
- *Uniloc USA Inc et al. v. LG Electronics U.S.A., Inc. et al.*, No. 4:17-cv-00832 (N.D. Tex.), subsequently transferred as No. 4:18-cv-02918 (N.D. Cal.);
- *Uniloc USA Inc et al. v. LG Electronics U.S.A., Inc. et al.*, No. 4:17-cv-00829 (N.D. Tex.), subsequently transferred as No. 4:18-cv-02917 (N.D. Cal.);
- *Uniloc USA, Inc et al v. HTC America, Inc.*, No. 2:17-cv-01629 (W.D. Wash.), subsequently consolidated under No. 2:17-cv-01558 (W.D. Wash.);
- *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:17-cv-00737 (E.D. Tex.);
- *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:17-cv-00736 (E.D. Tex.); and
- *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:17-cv-00746 (E.D. Tex.).

310. Of the thirteen lawsuits based on the DP Technologies Patents, at least four resulted in settlements:

- *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:17-cv-00652 (E.D. Tex.) and *Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:17-cv-00650 (E.D. Tex.) were dismissed pursuant to settlements in May 2020.
- *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:17-cv-00737 (E.D. Tex.) and *Uniloc USA, Inc. et al. v. Huawei Device USA, Inc. et al.*, No. 2:17-cv-00746 (E.D. Tex.) were dismissed pursuant to settlements in July 2019.

The details of the parties' settlement agreements are not publicly available.

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1           311. Of the nine other lawsuits based on the DP Technologies Patents, three were  
2 voluntarily dismissed, and six are stayed pending *inter partes* review.

3           312. Apple has been injured by the elimination of competition resulting from Fortress  
4 and the Uniloc Defendants' aggregation of patents in the Health Monitoring Patents Market.  
5 Specifically, by eliminating competition, this aggregation positioned Fortress and the Uniloc  
6 Defendants to seek supracompetitive royalties that the prior patent holders were unable to demand  
7 because of the competitive constraints they faced. Because it has refused to capitulate to exorbitant  
8 royalty demands, Apple has been injured by Fortress and the Uniloc Defendants having targeted  
9 Apple as part of their litigation campaign based on the DP Technologies Patents and the '759  
10 patent. Moreover, Apple and Intel have been injured as a result of the ongoing threat that  
11 Defendants will continue to assert patents in the Health Monitoring Patents Market against them.

12           313. Specifically, in June 2017, Uniloc USA and Uniloc Luxembourg filed three  
13 lawsuits against Apple in which it asserted that Apple devices infringe at least one patent in the  
14 Health Monitoring Patents Market. On June 2, 2017, Uniloc USA and Uniloc Luxembourg sued  
15 Apple, asserting that Apple's iPhones, iPads, and Watches infringe the '556 patent.<sup>82</sup> Uniloc USA  
16 and Uniloc Luxembourg also asserted two additional patents. As described above, the '556 patent  
17 assertion was meritless: Fullpower, the prior owner of the '556 patent, concluded that the  
18 accelerometers in fitness trackers like Apple's "do not monitor how much the foot is going up and  
19 how much is coming down," as required by the claims.<sup>83</sup> Moreover, nearly every claim of the '556  
20 patent was found invalid as indefinite in Uniloc USA and Uniloc Luxembourg's case against  
21 Samsung.<sup>84</sup> Uniloc USA and Uniloc Luxembourg have contended that they are entitled to damages  
22 of between \$1.41 and \$2.75 per Apple product for total damages in the range of \$375 to \$732  
23 million. The case is stayed pending *inter partes* review related to Case Nos. 4:18-cv-00361 and  
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25 \_\_\_\_\_  
26 <sup>82</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00470 (E.D. Tex.), subsequently transferred  
as No. 4:18-cv-00362 (N.D. Cal.) (PJH).

27 <sup>83</sup> *Uniloc USA, Inc. v. Apple Inc.*, 4:18-cv-00362 (N.D. Cal.) (PJH), Dkt. 120-2.

28 <sup>84</sup> Claim Construction Memorandum & Order, *Uniloc USA, Inc. v. Samsung Elecs. America, Inc.*, No. 2:17-cv-00651 (E.D. Tex. Oct. 24, 2018), Dkt. 77.

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1 4:18-cv-00364 (N.D. Cal.), two other cases, detailed below, in which Uniloc Luxembourg and  
 2 Uniloc USA assert patents in the Health Monitoring Patents Market.

3 314. On June 2, 2017, the same day Uniloc Luxembourg and Uniloc USA sued Apple  
 4 for infringing the '556 patent, Uniloc Luxembourg and Uniloc USA sued Apple for infringing  
 5 another patent in the Health Monitoring Patents Market—the '646 patent.<sup>85</sup> Uniloc Luxembourg  
 6 and Uniloc USA alleged that Apple products that implement “Raise to Wake” functionality  
 7 infringe the '646 patent. Uniloc Luxembourg and Uniloc USA claim that they are again entitled  
 8 to between \$1.41 and \$2.75 in damages per Apple device, resulting in total damages between  
 9 approximately \$167 million and \$326 million. After the case was transferred to the Northern  
 10 District of California, it was stayed pending *inter partes* review. In a final written decision issued  
 11 on May 21, 2019, the PTAB concluded that all challenged claims of the '646 patent are  
 12 unpatentable.<sup>86</sup> The case remains stayed pending appellate review of the PTAB’s decision.

13 315. On June 30, 2017, less than one month after Uniloc Luxembourg and Uniloc USA  
 14 asserted the '556 and '646 patents, the parties sued Apple for a third time, alleging that Apple  
 15 devices infringe three additional patents in the Health Monitoring Patents Market—the '508, the  
 16 '2723, and the '902 patents.<sup>87</sup> Uniloc USA and Uniloc Luxembourg again contend that they are  
 17 entitled to between \$1.41 and \$2.75 in damages per Apple device, for total damages between  
 18 approximately \$167 million and \$326 million for each allegedly infringed patent. After the case  
 19 was transferred to the Northern District of California, it was stayed pending *inter partes* review.  
 20 The PTAB found all challenged claims of the '508 patent unpatentable,<sup>88</sup> except for one claim for  
 21 which it declined to institute *inter partes* review.<sup>89</sup> Similarly, the PTAB found all challenged  
 22 claims of the '2723 patent unpatentable,<sup>90</sup> except for two claims for which it declined to institute  
 23

24 <sup>85</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00469 (E.D. Tex.), subsequently transferred  
 25 as No. 4:18-cv-00361 (N.D. Cal.) (PJH).

26 <sup>86</sup> *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-00289, Paper No. 22 (PTAB May 21, 2019).

27 <sup>87</sup> *Uniloc USA, Inc. et al. v. Apple Inc.*, No. 2:17-cv-00522 (E.D. Tex.), subsequently transferred  
 28 as No. 4:18-cv-00364 (N.D. Cal.) (PJH).

<sup>88</sup> *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-00387, Paper No. 21 (PTAB June 17, 2019).

<sup>89</sup> *Apple Inc. v. Uniloc Luxembourg SA*, IPR2018-01026, Paper No. 9 (PTAB Oct. 18, 2018).

<sup>90</sup> *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-00389, Paper No. 20 (PTAB June 17, 2019).

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1 *inter partes* review.<sup>91</sup> And the PTAB found all but one challenged claim of the '902 patent  
2 unpatentable.<sup>92</sup> The case remains stayed pending appellate review of the PTAB's decisions.

3 316. On October 20, 2017, Uniloc USA and Uniloc Luxembourg sued Apple in the  
4 Eastern District of Texas, alleging that devices that use Apple's watchOS infringe the '759  
5 patent,<sup>93</sup> another patent in the Health Monitoring Patents Market. The case was stayed pending  
6 *inter partes* review proceedings. On April 12, 2019, the PTAB concluded that all claims of the  
7 '759 Patent were unpatentable.<sup>94</sup> The case remains stayed pending appellate review of the PTAB's  
8 decision.

9 317. The supracompetitive licensing returns Fortress's PAEs have sought and obtained  
10 are direct evidence of its market power. For example, Fortress and the Uniloc Defendants have  
11 been able to coerce several parties (at least Samsung Electronics America and Huawei Device  
12 USA) to license its patents in the Health Monitoring Patents Market even though the patents' prior  
13 owner did not seek to enforce them. Likewise, the damages demands made of Apple far exceed  
14 the amounts that the original owner of one of the patents in the Health Monitoring Patents Market  
15 (*i.e.*, the '403 patent, which was assigned to IBM on its face) has sought for other of its patents.

16 [REDACTED]

17 [REDACTED]

18 [REDACTED] Fortress (through its PAEs) has been able to acquire patents and then, through the  
19 benefit of its anticompetitive scheme, extract inflated royalties from licensees that reflect the  
20 competition that has been eliminated through Defendants' patent aggregation and far exceeds the  
21 actual value of the patents based on their technical and commercial merits.

22 318. Defendants' demands also show that Fortress has the power to control prices in the  
23 Health Monitoring Patents Market. As detailed above, Fortress-backed entities have sought  
24

25 \_\_\_\_\_  
26 <sup>91</sup> *Apple Inc. v. Uniloc Luxembourg SA*, IPR2018-01027, Paper No. 8 (PTAB Oct. 18, 2018).

27 <sup>92</sup> *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-00424, Paper No. 21 (PTAB July 16, 2019); *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-01028, Paper No. 18 (PTAB Nov. 5, 2019).

28 <sup>93</sup> *Uniloc USA, Inc. et al v. Apple Inc.*, No. 2:17-cv-00708 (E.D. Tex.).

<sup>94</sup> *Apple Inc. v. Uniloc 2017 LLC*, IPR2018-00294, Paper No. 20 (PTAB Apr. 12, 2019).

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1 hundreds of millions of dollars from Apple.

2 **H. MOSFET Channel Fabrication**

3 319. As another example, Fortress, the Uniloc Defendants, and VLSI have aggregated  
4 patents relating to MOSFET channel fabrication. This corresponds to a part of the semiconductor  
5 fabrication process in which nanoscale MOSFET channels are formed on a semiconductor  
6 substrate. Modern digital processors include millions or billions of integrated MOSFET devices  
7 per chip, each of which includes a respective channel. There are no close substitutes for these  
8 fabrication techniques.

9 320. Fortress, the Uniloc Defendants, and VLSI have aggregated patents in an antitrust  
10 market for patents purporting to cover MOSFET channel fabrication techniques, the “MOSFET  
11 Channel Fabrication Patents Market.” The MOSFET Channel Fabrication Patents Market  
12 constitutes a relevant antitrust market where Fortress (either directly through its PAE subsidiaries  
13 or by acting in concert with the PAEs in which it invests) and other holders of patents claimed to  
14 read on MOSFET channel fabrication techniques compete with one another to license patents  
15 to semiconductor device manufacturers.

16 321. Among the patents Defendants have aggregated in the MOSFET Channel  
17 Fabrication Patents Market are U.S. Patent No. 6,995,452, U.S. Patent No. 6,541,319, U.S. Patent  
18 No. 6,087,232, U.S. Patent No. 7,183,149, and U.S. Patent No. 7,709,303, which purport to cover  
19 alternative techniques to control the etch process used to fabricate nanoscale MOSFET channels.

20 322. U.S. Patent No. 6,995,452 (“the ’452 patent”) is titled “MOSFET Device with  
21 Nanoscale Channel and Method of Manufacturing the Same” and issued on February 7, 2006.  
22 According to its abstract, the ’452 patent relates to “an SOI [silicon-on-insulator] MOSFET device  
23 with a nanoscale channel that has a source/drain region including a shallow extension region and  
24 a deep junction region formed by solid-phase diffusion and a method of manufacturing the SOI  
25 MOSFET device.” The ’452 patent is directed to controlling channel characteristics of a nanoscale  
26 MOSFET transistor by depositing etch masks doped with different impurities.

27 323. On its face, the ’452 patent is assigned to ETRI. On December 26, 2008, ETRI  
28

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1 assigned half of its interest in the '452 patent to IPG Electronics 502. On April 10, 2012, ETRI  
2 and IPG Electronics 502 assigned the '452 patent to Pendragon Electronics. On January 31, 2018,  
3 Pendragon Electronics assigned the '452 patent to Defendant Uniloc Luxembourg. On May 3,  
4 2018, Defendant Uniloc Luxembourg assigned the '452 patent to Defendant Uniloc 2017.

5 324. U.S. Patent No. 6,541,319 ("the '319 patent") is titled "Method of Manufacturing  
6 a Self-Aligned Gate Transistor with P-type Impurities Selectively Implanted Below the Gate,  
7 Source and Drain Electrodes" and issued on April 1, 2003. According to its abstract, the '319  
8 patent relates to "a self-aligned gate transistor." Its claims are directed to techniques for  
9 manufacturing a self-aligned gate transistor using a dry-etch technique.

10 325. On its face, the '319 patent is assigned to ETRI. On December 26, 2008, ETRI  
11 assigned one half of its interest in the '319 patent to IPG Electronics 502. On April 10, 2012, IPG  
12 Electronics 502 and ETRI assigned the '319 patent to Pendragon Electronics. On January 31,  
13 2018, Pendragon Electronics assigned the '319 patent to Uniloc Luxembourg. On May 3, 2018,  
14 Uniloc Luxembourg assigned the '319 patent to Uniloc 2017.

15 326. U.S. Patent No. 6,087,232 ("the '232 patent") is titled "Fabrication Method of  
16 Lateral Double Diffused MOS Transistors" and issued on July 11, 2000. According to its abstract,  
17 the '232 patent relates to "a method for manufacturing double RESURF (reduced SURface Field)  
18 LDMOS (Lateral Diffused Metal Oxide Semiconductor) transistors, on-resistance of double  
19 RESURF LDMOS transistors." Its claims are directed to a technique for fabricating a MOSFET  
20 using selective tapered etching of a TEOS oxide made of a three-layer structure having different  
21 etching rates.

22 327. On its face, the '232 patent is assigned to ETRI. On December 26, 2008, ETRI  
23 assigned one half of its interest in the '232 patent to IPG Electronics 502. On April 10, 2012, IPG  
24 Electronics 502 and ETRI assigned the '232 patent to Pendragon Electronics. On January 31,  
25 2018, Pendragon Electronics assigned the '232 patent to Uniloc Luxembourg. On May 3, 2018,  
26 Uniloc Luxembourg assigned the '232 patent to Uniloc 2017.

27 328. U.S. Patent No. 7,183,149 ("the '149 patent") is titled "Method of Manufacturing  
28



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1 Field Effect Transistor” and issued on February 27, 2007. According to its abstract, the ’149 patent  
2 relates to a method of manufacturing a field effect transistor in which “transistors having different  
3 threshold voltages can be manufactured without additional mask patterns using the least number  
4 of processes . . . .” Its claims are directed to a technique for fabricating a transistor by  
5 simultaneously etching an insulating layer and a resist pattern using the resist patterns as etch  
6 masks.

7 329. On its face, the ’149 patent is assigned to ETRI. On December 26, 2008, ETRI  
8 assigned one half of its interest in the ’149 patent to IPG Electronics 502. On April 10, 2012, IPG  
9 Electronics 502 and ETRI assigned the ’149 patent to Pendragon Electronics. On January 31,  
10 2018, Pendragon Electronics assigned the ’149 patent to Uniloc Luxembourg. On May 3, 2018,  
11 Uniloc Luxembourg assigned the ’149 patent to Uniloc 2017.

12 330. U.S. Patent No. 7,709,303 (“the ’303 patent”) is titled “Process for Forming an  
13 Electronic Device Including a Fin-type Structure” and issued on May 4, 2010. According to its  
14 abstract, the ’303 patent relates to “forming a semiconductor fin of a first height for a fin-type  
15 structure and removing a portion of the semiconductor fin such that the semiconductor fin is  
16 shortened to a second height.” The ’303 patent is directed to controlling channel characteristics of  
17 a nanoscale MOSFET transistor by selectively placing etch masks to enable partial removal of  
18 semiconductor layers.

19 331. On its face, the ’303 patent is assigned to Freescale. On August 16, 2016, Freescale  
20 assigned the ’303 patent to Defendant VLSI.

21 332. Defendants’ aggregation of patents in the MOSFET Channel Fabrication Patents  
22 Market (including at least five substitute patents) has reduced competition in that market, leading  
23 to inflated royalties and decreased licensing output. For example, the ’452 and ’303 patents each  
24 purport to cover techniques for controlling the etch process used to fabricate nanoscale MOSFET  
25 channels. Specifically, the ’452 patent purports to cover a selective doping technique in which an  
26 etch mask is selectively doped to control the etch process. On the other hand, the ’303 patent  
27 discloses a selective placement in which the etch mask is selectively placed with respect to other  
28



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1 MOSFET features to achieve improved process control. Selective doping of an etch mask is a  
2 substitute for selective placement of the etch mask, and vice versa. When the '452 and '303 patents  
3 were owned by different entities, a party wishing to use one of these potential substitute  
4 technologies would be able to take advantage of competition between the owners of these patents  
5 when attempting to secure a license. But because of Defendants' unlawful aggregation of patents,  
6 Defendants now control each of the substitute technologies, eliminating such competition.

7 333. That lessening of competition is reflected by the evidence of supracompetitive  
8 royalties sought by Defendants. Whereas the prior owners of the '452 patent and the '303 patent  
9 never asserted these patents because of the competitive constraints they faced, Defendant VLSI  
10 has pursued a lawsuit involving the '303 patent.

11 334. Intel has been injured by the elimination of competition resulting from Defendants'  
12 aggregation of patents in the MOSFET Channel Fabrication Patents Market. Specifically, this  
13 aggregation positioned Fortress and VLSI to seek supracompetitive royalties that the prior patent  
14 holders were unable to seek because of the competitive constraints they faced. Because it has  
15 refused to capitulate the exorbitant royalty demands, Intel has been injured by VLSI having  
16 targeted Intel for enforcement of the '303 patent. Moreover, Apple and Intel have been injured as  
17 a result of the ongoing threat that Defendants will continue to assert patents in the MOSFET  
18 Channel Fabrication Patents Market against them.

19 335. Specifically, as part of the VLSI California Action discussed above, Defendant  
20 VLSI (under Fortress's control) alleged that Intel's microprocessor fabrication methods infringed  
21 the '303 patent and seven other patents.<sup>95</sup> Intel sought VLSI's permission to disclose (under seal)  
22 VLSI's damages estimate for Intel's alleged infringement of the '303 patent, as well as the  
23 financial terms of VLSI's purchase of the patent from NXP (which had merged with Freescale);  
24 however, VLSI refused that consent. The damages estimates VLSI has disclosed publicly in  
25 connection with its assertion of the eight patents asserted in the VLSI California Action are  
26

27 \_\_\_\_\_  
28 <sup>95</sup> *VLSI Tech. LLC v. Intel Corp.*, No. 5:17-cv-05671 (N.D. Cal.) (BLF).

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1 exorbitant: as discussed above, VLSI disclosed that it would seek \$7.1 billion in that suit. That  
2 amount significantly exceeds what Freescale sought for this very patent. As discussed above,

3 [REDACTED]

4 [REDACTED]

5 [REDACTED] VLSI's damages estimate is also significantly more than Freescale  
6 has sought for other of its patents concerning microprocessor features. Specifically, in December  
7 2014, Intel purchased from Freescale for [REDACTED] a total of 29 patent families, including 13  
8 U.S. patents, for example: U.S. Patent Nos. 6,769,076 (Real-time Processor Debug System);  
9 6,845,419 (Flexible Interrupt Controller that Includes an Interrupt Force Register); 7,248,069  
10 (Method and Apparatus for Providing Security for Debug Circuitry); 5,889,788 (Wrapper Cell  
11 Architecture for Path Delay Testing of Embedded Core Microprocessors and Method of  
12 Operation); 6,134,675 (Method of Testing Multi-Core Processors and Multi-Core Processor  
13 Testing Device); 7,296,137 (Memory Management Circuitry Translation Information Retrieval  
14 during Debugging); 7,299,335 (Translation Information Retrieval Transparent to Processor Core);  
15 and 8,041,901 (Performance Monitoring Device and Method thereof). And in May 2015,

16 [REDACTED], including patents such  
17 as: U.S. Patent Nos. 5,943,274 (Method and Apparatus for Amplifying a Signal to Produce a  
18 Latched Digital Signal); 6,917,555 (Integrated Circuit Power Management for Reducing Leakage  
19 Current in Circuit Arrays and Method therefor); 7,200,719 (Prefetch Control in a Data Processing  
20 System); 7,638,903 (Power Supply Selection for Multiple Circuits on an Integrated Circuit); and  
21 6,013,571 (Microelectronic Assembly including Columnar Interconnections and Method for  
22 Forming Same).

23 336. After the PTAB instituted *inter partes* review proceedings to evaluate the  
24 patentability of the claims in the '303 patent (and five other patents asserted in the action), the  
25 parties stipulated to a stay of the VLSI California Action in March 2019. Ultimately, the PTAB

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1 issued a Final Written Decision finding all challenged claims of the '303 patent unpatentable.<sup>96</sup>  
2 Defendant VLSI filed a notice of appeal of the PTAB's decision regarding the '303 patent on  
3 January 31, 2020 but voluntarily dismissed the appeal on May 5, 2020.

4 337. The supracompetitive licensing returns Fortress's PAEs have sought are evidence  
5 of Defendants' market power and the anticompetitive effects that have resulted from their  
6 anticompetitive patent aggregation scheme. For example, VLSI has sought exorbitant royalties  
7 from Intel, even though the prior owners of the patents made no similar attempt to enforce the  
8 patents. Fortress (through its PAEs) has been able to acquire patents and then, through the benefit  
9 of its anticompetitive scheme, seek inflated royalties from licensees that reflect the competition  
10 that has been eliminated through Defendants' patent aggregation and far exceeds the actual value  
11 of the patents based on their technical and commercial merits.

12 338. Defendants' demands also show that Fortress has the power to control prices in the  
13 MOSFET Channel Fabrication Patents Market. As detailed above, VLSI has sought billions of  
14 dollars from Intel in connection with the assertion of the '303 patent and seven other patents VLSI  
15 obtained from the same prior owner.

16 **I. Digital Rights Management**

17 339. As another example, Fortress, the Uniloc Defendants, and IXI IP have aggregated  
18 patents relating to digital rights management. Digital rights management provides a way to protect  
19 digital files (*e.g.*, digital media, software, video games, and the like) from unauthorized use.  
20 Techniques directed to digital rights management enable a content distributor to enforce software  
21 licenses and restrict a user's ability to access and copy the digital files. Digital rights management  
22 is a common feature that many content distributors use to protect their digital assets, and there is  
23 no close substitute for the functionality.

24 340. Fortress, the Uniloc Defendants, and IXI IP have aggregated patents in an antitrust  
25 market for patents purporting to cover digital rights management capabilities, the "Digital Rights  
26

27 <sup>96</sup> *Intel Corp. v. VLSI Tech. LLC*, IPR2018-01105, Paper No. 44 (PTAB Dec. 2, 2019).  
28

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1 Management Patents Market.” The Digital Rights Management Patents Market constitutes a  
2 relevant antitrust market where Fortress (either directly through its PAE subsidiaries or by acting  
3 in concert with the PAEs in which it invests) and other holders of patents claimed to read on  
4 electronic devices that support digital rights management compete with one another to license  
5 patents to suppliers of such devices and supporting software.

6 341. Prior to Fortress gaining control over Uniloc Luxembourg and Uniloc USA, Uniloc  
7 Luxembourg and Uniloc USA aggregated substitute patents directed to digital rights management.  
8 These patents include U.S. Patent No. 5,579,222 (“Distributed License Administration System  
9 Using a Local Policy Server to Communicate with a License Server and Control Execution of  
10 Computer Programs”), U.S. Patent No. 5,490,216 (“System for Software Registration”), U.S.  
11 Patent No. 9,633,183 (“Modular Software Protection”), U.S. Patent No. 7,197,144 (“Method and  
12 Apparatus to Authenticate a User’s System to Prevent Unauthorized Use of Software Products  
13 Distributed to Users”), U.S. Patent No. 8,769,296 (“Software Signature Tracking”), and U.S.  
14 Patent No. 6,857,067 (“System and Method for Preventing Unauthorized Access to Electronic  
15 Data”).

16 342. Beginning in 2003, Uniloc Luxembourg, Uniloc USA, and Uniloc (Singapore)  
17 Private Limited carried out an extensive litigation campaign based on these patents. From 2003  
18 through 2014, these Uniloc entities asserted at least one of these patents in 104 lawsuits, several  
19 of which Uniloc USA and Uniloc Luxembourg continued pursuing after entering the December  
20 30, 2014 Uniloc-Fortress Revenue Sharing Agreement and Patent License Agreement with  
21 Fortress.

22 343. Of the 104 lawsuits based on these patents, at least seven resulted in settlements  
23 after defendants capitulated to the Uniloc entities’ demands, five of which were secured after  
24 joining forces with Fortress:

- 25 • *Uniloc USA, Inc., et al. v. Microsoft Corp., et al.*, No. 1:03-cv-00440 (D. R.I.)  
26 was dismissed pursuant to a settlement in March 2012
- 27 • *Uniloc USA, Inc. et al. v. Full Fat Productions Ltd.*, No. 6:12-cv-00464 (E.D.  
28 Tex.) was dismissed pursuant to a settlement in March 2013;

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- *Uniloc USA, Inc. et al. v. Electronic Arts Inc.*, No. 6:12-cv-00463 (E.D. Tex.) and *Uniloc USA, Inc. et al. v. Electronic Arts, Inc.*, No. 6:13-cv-00259 (E.D. Tex.) were dismissed pursuant to a settlement in January 2016;
- *Uniloc USA, Inc. et al. v. PerkinElmer, Inc.*, No. 6:14-cv-00921 (E.D. Tex.) was dismissed pursuant to a settlement in March 2016;
- *Uniloc USA, Inc. et al. v. Mojang AB*, No. 6:12-cv-00470 (E.D. Tex.) was dismissed pursuant to a settlement in August 2016; and
- *Uniloc USA, Inc. et al. v. Chief Architect, Inc.*, No. 6:14-cv-00421 (E.D. Tex.) was dismissed pursuant to a settlement in March 2017.

344. Of the remaining ninety-seven cases, ninety-one were dismissed either voluntarily or pursuant to a stipulated dismissal (indicating possible settlements); five were dismissed with prejudice after the patent claim at issue was invalidated; and one was dismissed for lack of subject matter jurisdiction.

345. After entering into Fortress's anticompetitive scheme, the Uniloc Defendants continued to acquire and assert at least one substitute patent that purports to cover techniques to protect digital software from unauthorized, unlicensed use.

346. Specifically, U.S. Patent No. 6,446,069 ("the '069 patent") is titled "Access Control System for a Multimedia Datastore" and issued on September 3, 2002. According to its abstract, the '069 patent relates to "a computer-implemented access control system." The '069 patent is directed to an access control system that limits users' access to functions of an application program executed by a computer.

347. On its face, the '069 patent is assigned to IBM. On September 27, 2017, IBM assigned the '069 patent to Uniloc Luxembourg. On May 3, 2018, Uniloc Luxembourg assigned the '069 patent to Uniloc 2017.

348. Less than three months later, on July 30, 2018, Uniloc 2017, Uniloc USA, and Uniloc Licensing USA sued Microsoft Corporation for infringing the '069 patent.<sup>97</sup> The Uniloc entities also asserted three additional patents. Four months after filing the lawsuit, the Uniloc entities voluntarily dismissed their claims without prejudice.

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<sup>97</sup> *Uniloc 2017 LLC et al. v. Microsoft Corporation*, No. 8:18-cv-01320 (C.D. Cal.).

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349. In addition to the substitute patents in the Digital Rights Management Patents Market aggregated by the Uniloc Defendants, Fortress controls and has asserted another substitute patent in this market via the patent's direct owner, IXI IP.

350. Specifically, U.S. Patent No. 7,016,648 ("the '648 patent") is titled "Method, System and Computer Readable Medium for Downloading a Software Component to a Device in a Short Distance Wireless Network" and issued on March 21, 2006. According to its abstract, the '648 patent relates to "downloading . . . a software component to a short distance wireless network in response to device information and/or user information." The '648 patent is directed to techniques for downloading software based on device information (*e.g.*, device type, device manufacturer) or user information (*e.g.*, user preferences, price plan).

351. On its face, the '648 patent is assigned to IXI Mobile (Israel) Ltd. On November 28, 2001, a change of name was executed from IXI Mobile Israel Ltd. to IXI R&D. On June 5, 2014, IXI R&D assigned the '648 patent to IXI IP. That same day, IXI IP conveyed a security interest in the '648 patent to Fortress Credit. On September 11, 2014, Fortress Credit Co. DBD LLC assigned its interest in the '648 patent to FCO V CLO Transferor LLC, another Fortress subsidiary.

352. Less than two weeks after IXI IP conveyed a security interest in the '648 patent to Fortress Credit, IXI IP initiated a litigation campaign based on the '648 patent. In 2014, IXI IP brought three lawsuits, asserting the same four patents in each case, including the '648 patent:

- *IXI Mobile (R&D) Ltd. et al. v. Samsung Electronics Co., Ltd. et al.*, No. 1:14-cv-04355 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03752 (N.D. Cal.) (HSG);
- *IXI Mobile (R&D) Ltd. et al. v. Blackberry Limited et al.*, No. 1:14-cv-04428 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03754 (N.D. Cal.) (HSG); and
- *IXI Mobile (R&D) Ltd. et al. v. Apple, Inc.*, No. 1:14-cv-07954 (S.D.N.Y.), subsequently transferred as No. 4:15-cv-03755 (N.D. Cal.) (HSG).

353. In June 2015, Apple and Samsung filed petitions for *inter partes* review, challenging the validity of each asserted claim of the patents at issue. In November 2015, the

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1 Court stayed the litigations pending *inter partes* review. The PTAB instituted review of all but  
2 one of the challenged claims. In December 2016, the PTAB found all the instituted claims  
3 unpatentable, including all eleven challenged claims of the '648 patent. Ultimately, the actions  
4 were dismissed following joint stipulations of dismissal without prejudice.

5 354. Defendants' aggregation of patents in the Digital Rights Management Patents  
6 Market (including at least eight substitute patents) has reduced competition in that market, leading  
7 to inflated royalties and decreased licensing output. For example, the '069 and '648 patents each  
8 purport to cover techniques to protect digital software from unauthorized, unlicensed use.  
9 Specifically, the '069 patent purports to cover methods for limiting a user's ability to access the  
10 features of a software program. Meanwhile, the '648 patent purports to cover a method for  
11 restricting the ability of a user to download software based on device information and user  
12 information. Restricting the available features of a software program can be a substitute for  
13 restricting the ability to download the software program, and vice versa. When the '069 and '648  
14 patents were owned by different entities, a party wishing to use one of these potential substitute  
15 technologies would be able to take advantage of competition between the owners of these patents  
16 when attempting to secure a license. But because of Defendants' unlawful aggregation of patents,  
17 Defendants now control each of the substitute technologies, eliminating such competition.

18 355. That lessening of competition is reflected by the evidence of supracompetitive  
19 royalties demanded and received by Defendants. Defendants have pursued numerous assertions  
20 and secured multiple settlements for substantial royalties.

21 356. Apple has been injured by the elimination of competition resulting from Fortress,  
22 the Uniloc Defendants, and IXI IP's aggregation of patents in the Digital Rights Management  
23 Patents Market. Specifically, by eliminating competition, this aggregation positioned Fortress, the  
24 Uniloc Defendants, and IXI IP to demand supracompetitive royalties that the prior patent holders  
25 were unable to demand because of the competitive constraints they faced. Because it has refused  
26 to capitulate to exorbitant royalty demands, Apple has been injured by Fortress and IXI IP having  
27 targeted Apple as part of their litigation campaign based on these patents. Moreover, Apple and  
28



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Intel have been injured as a result of the ongoing threat that Defendants will continue to assert patents in Digital Rights Management Patents Market against them.

357. The supracompetitive licensing returns Fortress's PAEs have obtained are direct evidence of its market power. For example, the Uniloc Defendants have been able to coerce several parties (including at least PerkinElmer, Chief Architect Inc., Mojang AB, and Electronic Arts Inc) to license its patents in the Digital Rights Management Patents Market, even though the patents have repeatedly been shown to lack merit. Fortress (through its PAEs) has been able to acquire patents and then, through the benefit of its anticompetitive scheme, extract inflated royalties from licensees that reflect the competition that has been eliminated through Defendants' patent aggregation and far exceeds the actual value of the patents based on their technical and commercial merits.

358. Defendants' demands also show that Fortress has the power to control prices in the Digital Rights Management Patents Market.

**J. Additional Examples of Substitute Patents Aggregated by Defendants**

359. In addition to the examples of substitute patents described above, Fortress controls additional substitute patents aggregated across Defendant PAEs. In each of the below Relevant Patents Markets, although none of the patents have yet been asserted by Defendants, Apple and Intel have been injured as a result of the ongoing threat that Defendants will assert such patents.

**1. Cryptographic Algorithms Using Modular Multiplication**

360. Fortress, the Uniloc Defendants, and VLSI have aggregated patents relating to cryptographic algorithms that use modular multiplication. Cryptographic algorithms are used to improve the security of electronic systems by transmitting and storing data in an encrypted form, and subsequently to decrypt the data for further processing. One common arithmetic operation used in modern cryptographic algorithms is modular multiplication. There is no close substitute for the functionality.

361. Fortress, the Uniloc Defendants, and VLSI have aggregated patents in an antitrust market for patents purporting to cover cryptographic algorithms using modular multiplication, the

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1 “Cryptographic Algorithms Patents Market.” The Cryptographic Algorithms Patents Market  
2 constitutes a relevant antitrust market where Fortress (either directly through its PAE subsidiaries  
3 or by acting in concert with the PAEs in which it invests) and other holders of patents claimed to  
4 read on electronic devices that rely on cryptographic algorithms using modular multiplication  
5 compete with one another to license patents to suppliers of such devices and supporting software.

6 362. Among the patents Defendants have aggregated are U.S. Patent No. 5,954,788 and  
7 U.S. Patent No. 7,395,295, both of which purport to cover alternative techniques to perform  
8 modular multiplication operations used in cryptographic algorithms.

9 363. U.S. Patent No. 5,954,788 (“the ’788 patent”) is titled “Apparatus for Performing  
10 Modular Multiplication” and issued on September 21, 1999. According to its abstract, the ’788  
11 patent relates to an apparatus including two multiplicand registers, a multiplier word counter, a  
12 partial product calculator, a quotient estimation calculator, a multiplier, a multiplexer, a subtracter,  
13 a left word shifter, and a result register. It claims algorithms for multiplier machines, which are  
14 used in cryptography.

15 364. On its face, the ’788 patent is assigned to ETRI. On December 26, 2008, ETRI  
16 assigned one half of its interest in the ’788 patent to IPG Electronics 502. On April 10, 2012,  
17 ETRI and IPG Electronics 502 assigned the ’788 patent to Pendragon Electronics. On January 31,  
18 2018, Pendragon Electronics assigned the ’788 patent to Defendant Uniloc Luxembourg. On May  
19 3, 2018, Defendant Uniloc Luxembourg assigned the ’788 patent to Defendant Uniloc 2017.

20 365. U.S. Patent No. 7,395,295 (“the ’295 patent”) is titled “Pipeline Core in  
21 Montgomery Multiplier” and issued on July 1, 2008. According to its abstract, the ’295 patent  
22 relates to “multiplying a first long integer entity with a second long integer entity modulo a prime  
23 number.” Like the ’788 patent, it also claims an algorithm for a multiplier machines.

24 366. On its face, the ’295 patent is assigned to NXP B.V. On December 22, 2018, NXP  
25 B.V. assigned the ’295 patent to Defendant VLSI.

26 2. DRAM Refreshing

27 367. As an additional example, Fortress, the Uniloc Defendants, and VLSI have  
28

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1 aggregated patents relating to dynamic random access memory (“DRAM”) refreshing. DRAM is  
2 a type of memory that is commonly used in a wide variety of electronic systems. DRAM stores  
3 information on capacitor plates, which are prone to leakage and need to be refreshed periodically  
4 to maintain their state. There is no close substitute for DRAM refreshing functionality.

5 368. Fortress, the Uniloc Defendants, and VLSI have aggregated patents in an antitrust  
6 market for patents purporting to cover DRAM refreshing capabilities, the “DRAM Refreshing  
7 Patents Market.” The DRAM Refreshing Patents Market constitutes a relevant antitrust market  
8 where Fortress (either directly through its PAE subsidiaries or by acting in concert with the PAEs  
9 in which it invests) and other holders of patents claimed to read on electronic devices with DRAM  
10 refreshing capabilities compete with one another to license patents to suppliers of such devices.

11 369. Among the patents Defendants have aggregated in the DRAM Refreshing Patents  
12 Market are U.S. Patent No. 7,088,632 and U.S. Patent No. 6,807,604, both of which purport to  
13 cover alternative techniques to efficiently refresh DRAM memory.

14 370. U.S. Patent No. 7,088,632 (“the ’632 patent”) is titled “Automatic Hidden Refresh  
15 in a DRAM and Method Therefor” and issued on August 8, 2006. According to its abstract, the  
16 ’632 patent relates to “[a] fully hidden refresh mode [that] allows for timely refresh operations  
17 while [the memory is] operating in cache line mode.” The ’632 patent is directed to a technique  
18 for refreshing a variable stored in DRAM in a fully hidden mode.

19 371. On its face, the ’632 patent is assigned to Freescale. On November 7, 2016,  
20 Freescale assigned the ’632 patent to NXP as part of the merger between the companies. On  
21 December 4, 2017, NXP assigned the ’632 patent to Defendant VLSI.

22 372. U.S. Patent No. 6,807,604 (“the ’604 patent”) is titled “Method of Refreshing a  
23 Dynamic Memory” and issued on October 19, 2004. According to its abstract, the ’604 patent  
24 relates to “[a] method of refreshing a dynamic memory intended for storing variables involved in  
25 operations performed by a processor, includes a step of planning [] an order and a timing of the  
26 operations.” The ’604 patent is directed to a technique for refreshing a variable stored in DRAM  
27 at a forecasted instant in time.  
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1           373. On its face, the '604 patent is assigned to Philips. On January 30, 2009, Philips  
2 assigned the '604 patent to IPG Electronics 503. On April 10, 2012, IPG Electronics 503 assigned  
3 the '604 patent to Pendragon Wireless. On January 31, 2018, Pendragon Wireless assigned the  
4 '604 patent to Defendant Uniloc Luxembourg. On May 3, 2018 Defendant Uniloc Luxembourg  
5 assigned the '604 patent to Defendant Uniloc 2017.

6                   3.     Input/Output Pads

7           374. As another example, Fortress, the Uniloc defendants, and VLSI have aggregated  
8 patents relating to Input/Output (I/O) pads. I/O pads are used to transfer electrical signals (e.g.,  
9 data and power signals) between an integrated circuit device and external components. Virtually  
10 all integrated circuit devices include one or more I/O pads, and there is no close substitute for  
11 the functionality.

12           375. Fortress, the Uniloc defendants, and VLSI have aggregated patents in an antitrust  
13 market for patents purporting to cover I/O pads, the "I/O Pad Patents Market." The I/O Pad Patents  
14 Market constitutes a relevant antitrust market where Fortress (either directly through its PAE  
15 subsidiaries or by acting in concert with the PAEs in which it invests) and other holders of patents  
16 claimed to read on integrated circuit devices with I/O pads compete with one another to license  
17 patents to suppliers of such devices.

18           376. Among the patents Defendants have aggregated in the I/O Pad Patents Market is  
19 U.S. Patent No. 7,836,369 and U.S. Patent No. 6,774,697, both of which purport to cover  
20 alternative techniques to configure electrical signals sent via input/output pads.

21           377. U.S. Patent No. 7,836,369 ("the '369 patent") is titled "Device and Method for  
22 Configuring Input/Output Pads" and issued on November 16, 2010. According to its abstract, the  
23 '369 patent relates to "determining a current configuration of multiple IO pads of an integrated  
24 circuit and . . . generating multiple boundary scan register words that comprise Configuration  
25 information." Its claims are directed to methods for configuring a configurable I/O pad circuit.

26           378. On its face, the '369 patent is assigned to Freescale. On November 7, 2016,  
27 Freescale assigned the '369 patent to NXP as part of the merger between the companies. On April  
28

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12, 2017, NXP assigned the '369 patent to Defendant VLSI.

379. U.S. Patent No. 6,774,697 (“the '697 patent”) is titled “Input and Output Port Circuit” and issued on August 10, 2004. According to its abstract, the '697 patent relates to a port circuit where “[t]he high voltage and the low voltage can be simultaneously driven using only a single output driving circuit and the single output driving circuit is constructed in multiple stages and is selectively driven by the output control register.” Its claims are directed to reducing power consumption by an I/O port circuit.

380. On its face, the '697 patent is assigned to ETRI. On December 26, 2008, ETRI assigned one half of its interest in the '697 patent to IPG Electronics 502. On April 10, 2012, ETRI and IPG Electronics 502 assigned the '697 patent to Pendragon Electronics. On January 31, 2018, Pendragon Electronics assigned the '697 patent to Defendant Uniloc Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg assigned the '697 patent to Defendant Uniloc 2017.

4. Fingerprint Authentication

381. As another example, Fortress and the Uniloc Defendants have aggregated patents relating to fingerprint authentication. Fingerprint authentication enables individuals to be securely identified based on images of their fingerprints. Fingerprint authentication is commonly incorporated into electronic devices, such as smartphones and other devices to provide security, and there is no close substitute for this functionality.

382. Fortress and the Uniloc Defendants have aggregated patents in an antitrust market for patents purporting to cover fingerprint authentication capabilities, the “Fingerprint Authentication Patents Market.” The Fingerprint Authentication Patents Market constitutes a relevant antitrust market where Fortress (either directly through its PAE subsidiaries or by acting in concert with the PAEs in which it invests) and other holders of patents claimed to read on electronic devices with fingerprint authentication capabilities compete with one another to license patents to suppliers of such devices and supporting software.

383. Among the patents Defendants have aggregated are U.S. Patent No. 7,079,670, U.S. Patent No. 6,289,112, and U.S. Patent No. 6,118,890, all of which purport to cover alternative

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1 techniques to identify an individual based on a fingerprint image.

2 384. U.S. Patent No. 7,079,670 (“the ’670 patent”) is titled “Apparatus and Method for  
3 Authenticating a User by Employing Feature Points of a Fingerprint Image of the User” and issued  
4 on July 18, 2006. According to its abstract, the ’670 patent relates to “a fingerprint image input  
5 circuit [that] scans a fingerprint of a user to be registered to provide a first fingerprint image and a  
6 fingerprint of a user to be authenticated to provide a second fingerprint image.” Its claims are  
7 directed to techniques for authenticating a fingerprint image by comparing features in the image  
8 with registered features.

9 385. On its face, the ’670 patent is assigned to ETRI. On December 26, 2008, ETRI  
10 assigned one half of its interest in the ’670 patent to IPG Electronics 502. On April 10, 2012,  
11 ETRI and IPG Electronics 502 assigned the ’670 patent to Pendragon Electronics. On January 31,  
12 2018, Pendragon Electronics assigned the ’670 patent to Defendant Uniloc Luxembourg. On May  
13 3, 2018, Defendant Uniloc Luxembourg assigned the ’670 patent to Defendant Uniloc 2017.

14 386. U.S. Patent No. 6,289,112 (“the ’112 patent”) is titled “System and Method for  
15 Determining Block Direction in Fingerprint Images” and issued on September 11, 2001.  
16 According to its abstract, the ’112 patent relates to “[a] reliable estimate of image pixel (fingerprint  
17 ridge) orientations, and block orientations for a given block [that] is determined by finding an  
18 optimal block size in an area of an image, *e.g.*, a fingerprint image.” Its claims are directed to  
19 techniques for authenticating a fingerprint image by analyzing intensity gradients in the image.

20 387. On its face, the ’112 patent is assigned to IBM. On September 26, 2007, IBM  
21 assigned the ’112 patent to IPG Healthcare. On April 10, 2012, IPG Healthcare assigned the ’112  
22 patent to Pendragon Networks. On January 31, 2018, Pendragon Networks assigned the ’112  
23 patent to Defendant Uniloc Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg  
24 assigned the ’112 patent to Defendant Uniloc 2017.

25 388. U.S. Patent No. 6,118,890 (“the ’8890 patent”) is titled “System and Method for  
26 Broad Classification of Biometric Patterns” and issued on September 12, 2000. According to its  
27 abstract, the ’8890 patent relates to “[a] computer implemented method [that] may be used in  
28

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1 classifying and identifying finger prints.” Its claims are directed to techniques for authenticating  
2 a fingerprint image by analyzing intersections of fiducial lines.

3 389. On its face, the ’8890 patent is assigned to IBM. On September 26, 2007, IBM  
4 assigned the ’8890 patent to IPG Healthcare. On April 10, 2012, IPG Healthcare assigned the  
5 ’8890 patent to Pendragon Networks. On January 31, 2018, Pendragon Networks assigned the  
6 ’8890 patent to Defendant Uniloc Luxembourg. On May 3, 2018, Defendant Uniloc Luxembourg  
7 assigned the ’8890 patent to Defendant Uniloc 2017.

8 **K. Defendants’ Assertions of Portfolios Encompassing Substitute Patents**

9 390. As described above, although Defendants have entered into settlements with  
10 multiple other targets of their anticompetitive scheme, the precise details regarding the settlement  
11 terms and royalties paid to Defendants are not publicly available. In fact, at least two courts—the  
12 Northern District of California and the Federal Circuit—have determined that the Uniloc  
13 Defendants have improperly sought to over-redact information contained in court filings, including  
14 references to and citations from court decisions, and information regarding their licensees and  
15 license payments made.<sup>98</sup> Likewise, although details regarding the financial terms under which  
16 Fortress and VLSI obtained VLSI’s patents, and the damages amounts VLSI claims Intel owes it  
17 may well bear on Plaintiffs’ claims, Fortress and VLSI have refused Intel’s request to disclose  
18 such information to this Court (even subject to a request to seal). Accordingly, the full extent of  
19 the supracompetitive royalties Fortress and its PAEs have extracted through their scheme can only  
20 be obtained through discovery.

21 391. It is clear, however, that Fortress and its PAEs typically do not seek royalties or  
22 grant licenses on a patent-by-patent basis. Instead, individual patents are often asserted with other  
23 patents in a given Defendant’s portfolio, and settlements obtained appear to address multiple  
24 lawsuits and other assertions. Defendants take advantage of their aggregation by making  
25 exorbitant royalty demands with product suppliers no longer able to use the threat of licensing  
26

27 <sup>98</sup> See *Uniloc 2017 LLC et al. v. Apple, Inc.*, 2019-1922 (Fed. Cir. July 9, 2020); *Uniloc 2017*  
28 *LLC v. Apple Inc.*, 2019 U.S. Dist. LEXIS 78049 (N.D. Cal., May 7, 2019).



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1 from independent holders of substitute patents that were available before Defendants' patent  
2 aggregations occurred.

3 392. Defendants' practice of licensing on a portfolio basis is consistent with typical  
4 licensing practices in the electronics industry, where licensing generally occurs on a portfolio-wide  
5 basis. This is also consistent with Uniloc's in-court representations that its practice is not to  
6 conduct per-patent valuations.<sup>99</sup>

7 393. Accordingly, although aggregations of substitute patents and the resulting  
8 anticompetitive effects through elimination of competition are sometimes evidenced by patent  
9 assertions or lawsuits that specifically reference patents that Defendants have aggregated, more  
10 often these anticompetitive effects are reflected in inflated royalty demands or licensing terms for  
11 patent portfolios that include both patents that are substitutes and patents that are complements.  
12 The inflated portfolio royalties sought or obtained are made possible by Defendants' aggregations  
13 of substitute patents, which eliminate alternatives for Defendants' targets and thereby reduce their  
14 bargaining leverage against Defendants' assertions.

15 **IV. SEP TRANSFER SCHEMES**

16 394. As described above, INVT and Uniloc 2017 hold what they claim are SEPs for  
17 cellular standards and that are subject to commitments to license on FRAND terms.

18 **A. Cellular Standards and the Risks of Standard Setting**

19 395. Standards, such as LTE, are created and publicly distributed by standard setting  
20 organizations ("SSOs"). Industry standards provide potential benefits by allowing devices made  
21 by different companies to communicate with each other because these devices support the same  
22 standard. But standards also present risks of harm to competition and consumers when patent  
23 holders claim to have patents essential to the standards—*i.e.*, the standard cannot be practiced  
24 without using the patent—and exploit those patents to demand excessive royalties or hold up  
25

26 \_\_\_\_\_  
27 <sup>99</sup> See Transcript of Proceedings at 23, *Uniloc USA, Inc. v. Apple, Inc.*, No. 5:19-cv-01692 (N.D.  
28 Cal. July 14, 2020) (EJD) ("There does not exist a valuation for groups of patents or individual  
patents.").

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1 companies that use the standard. Before a standard is set, the SSO can choose different ways of  
2 implementing particular functionality within the standard. But once the standard is set and  
3 technology to perform a particular functionality is incorporated in the standard, users of the  
4 standard become “locked in” to using that technology through their investment in products and  
5 services that support the standard. This “lock-in” effect creates a risk that patent holders claiming  
6 to have essential patents will attempt to exploit their patents by demanding excessive royalties or  
7 seeking to enjoin the use of their patents. In particular, SEP holders may seek royalties that do not  
8 reflect the incremental value of their patents (which may cover only a fraction of the matter  
9 addressed in a given standard) but instead are based on the user’s investments in supporting the  
10 standard.

11 396. The risk of exploitative SEP licensing conduct is exacerbated by the fact that SSOs  
12 typically make no evaluation of whether a claimed-essential patent is actually essential.

13 397. In response to this risk of exploitative behavior, SSOs have adopted licensing  
14 commitments that govern patents claimed to be essential to a standard. Many SSOs impose a  
15 requirement that patent holders claiming to have essential patents timely disclose those patents to  
16 the SSO and commit to license them on FRAND terms and conditions.

17 398. FRAND royalties for SEPs should reflect the ex ante value of the technology  
18 covered by the SEP before standardization, when alternative means of performing the functions  
19 purportedly covered by the patented technology were available. That is, FRAND royalties should  
20 be apportioned so that they do not reflect any value attributable to adoption in the standard of the  
21 feature covered by the SEP or unpatented features within the standard.

**B. ETSI and Its Intellectual Property Rights Policy**

22  
23 399. ETSI is an independent, non-profit SSO that produces globally-accepted standards  
24 for the telecommunications industry. ETSI has more than 800 members from over 60 countries  
25 across five continents. ETSI created or helped to create many telecommunication standards,  
26 including the 2G (*e.g.*, GSM), 3G (*e.g.*, WCDMA/UMTS), and 4G (LTE) cellular communication  
27 standards.  
28

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1           400. Along with six other regional SSOs, ETSI is an Organizational Partner in the Third  
2 Generation Partnership Project (“3GPP”). 3GPP produces technical specifications that are adopted  
3 as standards by Organizational Partners, such as ETSI. 3GPP was created to oversee work on  
4 global 3G cellular specifications and has subsequently worked on creating 4G specifications. The  
5 3GPP Organizational Partners agreed that members of a particular Organizational Partner would  
6 be bound by the intellectual property rights (“IPR”) policy of that Organizational Partner when  
7 participating at 3GPP.

8           401. ETSI has adopted an IPR Policy, incorporated as Annex 6 of the ETSI Rules of  
9 Procedure. The ETSI IPR Policy is governed by the laws of France and provides that “[a]ny right  
10 granted to, and any obligation imposed on, a MEMBER which derives from French law and which  
11 are not already contained in the national or supranational law applicable to that MEMBER is to be  
12 understood as being of solely a contractual nature.”

13           402. Among other requirements, the ETSI IPR Policy obligates members to disclose to  
14 ETSI and its members patents and patent applications that a member believes are or may become  
15 essential to an ETSI standard. Once such a disclosure is made, the member is requested to submit  
16 an irrevocable undertaking confirming its willingness to license the IPRs it has disclosed on  
17 FRAND terms and conditions.

18           403. Specifically, Clause 4.1 of the ETSI IPR Policy provides as follows regarding the  
19 disclosure obligation at ETSI:

20                   Subject to Clause 4.2 below, each MEMBER shall use its reasonable  
21 endeavours, in particular during the development of a STANDARD  
22 or TECHNICAL SPECIFICATION where it participates, to inform  
23 ETSI of ESSENTIAL IPRs in a timely fashion. In particular, a  
24 MEMBER submitting a technical proposal for a STANDARD or  
TECHNICAL SPECIFICATION shall, on a bona fide basis, draw  
the attention of ETSI to any of that MEMBER’s IPR which might  
be ESSENTIAL if that proposal is adopted.

25           404. In its second sentence, Clause 4.1 imposes a “particular” requirement on members  
26 submitting a technical proposal to disclose the existence of any potentially essential IPR when a  
27 proposal is made and no later than when the standard has been adopted.  
28

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1           405. The disclosure requirement under Clause 4.1 of the ETSI IPR Policy is intended to  
 2 ensure that when ETSI members (or participants at 3GPP) are deciding on the content of a  
 3 particular standard specification, they understand that there is IPR that may potentially be  
 4 implicated if certain technology is standardized. This knowledge allows members to make choices  
 5 regarding technologies to standardize with a more informed understanding of the consequences of  
 6 their choices. ETSI and its members rely on the safeguards of the disclosure and FRAND licensing  
 7 obligation to ensure the viability and commercial potential of the standards adopted by ETSI.

8           406. The ETSI IPR Policy further requests that SEP owners submit an irrevocable  
 9 written undertaking that they are prepared to grant irrevocable licenses on “fair, reasonable, and  
 10 non-discriminatory” or FRAND terms and conditions. Clause 6.1 states:

11                   When an ESSENTIAL IPR relating to a particular STANDARD or  
 12 TECHNICAL SPECIFICATION is brought to the attention of  
 13 ETSI, the Director-General of ETSI shall immediately request the  
 14 owner to give within three months an irrevocable undertaking in  
 writing that it is prepared to grant irrevocable licences on fair,  
 reasonable and non-discriminatory (“FRAND”) terms and  
 conditions under such IPR to at least the following extent:

- 15                   • MANUFACTURE, including the right to make or have made  
 16 customized components and sub-systems to the licensee's own  
 design for use in MANUFACTURE;
- 17                   • sell, lease, or otherwise dispose of EQUIPMENT so  
 18 MANUFACTURED;
- 19                   • repair, use, or operate EQUIPMENT; and
- 20                   • use METHODS.

21                   The above undertaking may be made subject to the condition that  
 those who seek licences agree to reciprocate.

22           407. ETSI’s IPR Policy was designed to benefit all ETSI members, as well as all other  
 23 parties (including manufacturers and consumers) that supply products that support an ETSI  
 24 standard. In particular, the Policy describes in Clause 3.1 that it has the objective to “reduce the  
 25 risk” to those implementing the standards or other technical specifications “that investment in the  
 26 preparation, adoption and application of the STANDARDS could be wasted as a result of an  
 27 ESSENTIAL IPR for a STANDARD or TECHNICAL SPECIFICATION being unavailable.”  
 28

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1           408. Through disclosure of potentially essential IPRs and obtaining FRAND  
2 commitments for them, ETSI can include technology in its standards that may be covered by IPRs  
3 with confidence that hold-up tactics by owners of declared SEPs will not undermine the subsequent  
4 widespread adoption of the standards. If ETSI becomes aware of a potentially essential IPR for  
5 which a FRAND undertaking is not made, the IPR Policy requires that ETSI avoid standardizing  
6 the technology claimed by that IPR. In particular, Section 8.1.1 of the ETSI IPR Policy provides  
7 that ETSI must take steps to ensure that a “viable alternative technology” is available where IPR  
8 cannot be licensed on FRAND terms and conditions:

9                       Where prior to the publication of a STANDARD or a TECHNICAL  
10                      SPECIFICATION an IPR owner informs ETSI that it is not prepared  
11                      to license an IPR in respect of a STANDARD or TECHNICAL  
12                      SPECIFICATION in accordance with Clause 6.1 above, the General  
13                      Assembly shall review the requirement for that STANDARD or  
14                      TECHNICAL SPECIFICATION and satisfy itself that a viable  
15                      alternative technology is available for the STANDARD or  
16                      TECHNICAL SPECIFICATION which:

17                      - is not blocked by that IPR; and

18                      - satisfies ETSI's requirements

19           409. Apple is an ETSI member through the participation of its European subsidiaries.  
20 The ETSI IPR Policy defines a “MEMBER” as including the member’s “affiliates,” which  
21 includes those entities owned or controlled by a member.  
22

23           **C. Holders of Declared SEPs Have Monopoly Power in Input Technology**  
24           **Markets For Standardized Functionalities**

25           410. Each cellular standard developed by ETSI or 3GPP consists of many different  
26 technologies that perform a variety of functions. The technologies that perform each of these  
27 functions are essential inputs into the manufacture and supply of products and services that support  
28 the standards.

          411. In the process of developing cellular specifications and standards, ETSI and 3GPP  
participants choose particular technology to provide each individual function encompassed by the  
standards. ETSI and 3GPP participants evaluate whether to standardize particular proposed  
functions and, if so, which viable, alternative competing technologies to select to perform those

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1 functions.

2 412. Once a standard, like LTE, is adopted, the viability of using alternative technologies  
3 that are not standardized to perform functions included in the standard is constrained or eliminated.  
4 That is, standardization constrains or eliminates as substitutes all the technologies that would have  
5 been capable of performing the functionality in the standard but that were not chosen to perform  
6 that function. Parties supplying products that support the standard, such as Apple, become  
7 “locked-in” to the standardized technology.

8 413. If a technology selected for inclusion in the standard is protected by patents, the  
9 patent owner controls the supply of that particular input technology for the standard. This is true  
10 for each function comprising the standard for which patented technology was selected.

11 414. The functionality for cellular standards associated with each input technology  
12 comprises its own relevant market for antitrust purposes (individually, an “Input Technology  
13 Market,” and collectively, the relevant “Input Technology Markets”). Fortress, INVT, and Uniloc  
14 2017 hold monopoly power in the various Input Technology Markets for the various functions  
15 claimed to be covered by their declared SEPs. That is because, post-standardization, formerly  
16 viable alternative technologies are no longer viable because of the lock-in effect of standards  
17 discussed above.

18 415. Cellular standards are employed throughout the world and alternative technologies  
19 competing to be incorporated into the cellular standards were offered by suppliers from around the  
20 world. Accordingly, the geographic scope of each of the relevant Input Technologies Markets  
21 described above is worldwide.

22 416. SEP holders have the power to raise prices and exclude competition with respect to  
23 each of the technologies covered by their patents and incorporated in the relevant standard. An  
24 Input Technology Market has high barriers to entry because the standardization process eliminates  
25 the viability of alternative technologies as substitutes to perform the standardized functionality in  
26 the Input Technology Market.

27 417. Simply by asserting that they have large portfolios of essential patents, INVT and  
28

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Uniloc 2017 can obtain royalties or other licensing terms for the patents above what they could have obtained before ETSI or 3GPP standardized the technology that INVT and Uniloc 2017 claims is covered by their patents. INVT and Uniloc 2017 have such hold-up power because without a license, a party supplying products that support the relevant cellular standards risks being unable to market those products and having its entire business put in peril.

**D. Fortress, INVT, and the Uniloc Defendants' Anticompetitive SEP Transfer Schemes**

418. Inventergy acquired declared essential SEPs from Panasonic subject to obligations for Inventergy to share with Panasonic the royalties it obtained from licensees. Inventergy, through its wholly-owned subsidiary Inventergy, Inc., transferred these patents to INVT, including, for example, U.S. Patent Nos. 6,366,763, 6,637,001, 6,813,323, 6,940,428, 6,847,828, 5,583,851, 6,336,040, 5,818,869, 6,175,558, 6,697,384, 6,466,563, 6,370,134, RE37,420, 6,760,590, 5,757,870, 5,873,027, 6,295,301, 6,301,237, 6,529,492, 6,370,131, 6,381,445, 6,370,359, 6,487,394, 6,597,894, 7,035,233, 6,584,088, 6,549,526, RE39,954, 6,505,035, 6,973,289, 6,611,676, 6,734,810, 7,339,949, 6,799,053, 7,206,587, 7,460,502, 7,386,321, 6,922,159, 7,636,551, 8,175,604, and 7,535,864 which have directly (or as family members) been declared essential to the UMTS standard, and U.S. Patents Nos. 7,646,702, 8,775,890, 6,760,590, 6,799,053, 7,206,587, 8,238,226, 9,397,794, and 9,015,546 which have directly (or as family members) been declared essential to the LTE standard.

419. Inventergy also acquired declared essential SEPs that originated with Nokia, which Inventergy, through its wholly-owned subsidiary Inventergy, Inc., transferred to INVT. For example, INVT owns U.S. Patent Nos. 7,925,762, 7,065,339, and 7,917,620, which, as family members, have been declared essential to the UMTS standard, U.S. Patent Nos. 7,925,762, 7,623,529, 7,065,339, and 7,917,620 which have directly (or as a family members) been declared essential to the GSM standard, and U.S. Patent No. 7,065,339, which has been declared essential to the LTE standard.

420. Additionally, Inventergy also acquired declared essential SEPs that originated with



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Huawei, which Inventergy, through its wholly-owned subsidiary Inventergy, Inc., transferred to INVT. For example, INVT owns U.S. Patent Nos. 7,835,352, 8,213,419, and 8,185,105, which, as a family member to another patent, has been declared essential to the UMTS standard.

421. Uniloc Luxembourg received SEPs that originated with Philips, to which Uniloc Luxembourg granted Uniloc USA rights to be an exclusive licensee, and which it later transferred to Uniloc 2017. For example, Uniloc 2017 owns U.S. Patent Nos. 6,111,438, 6,133,765, 6,167,237, 6,104,354, 6,707,858, 6,363,513, 6,543,025, 6,304,612, 7,161,952, 7,103,070, 6,954,634, 6,965,582, 7,075,917, 7,151,916, 7,049,954, 7,171,206, 7,082,156, 7,212,158, 7,283,832, 7,286,841, 7,308,266, 7,167,487, and 6,868,079,<sup>100</sup> which [REDACTED]

422. Additionally, Uniloc 2017 received purported SEPs that originated with Philips, including U.S. Patent Nos. 7,016,676, 6,664,891, and 6,519,005, which Uniloc 2017 appears to allege is essential to the UMTS standard in a case against Verizon Communications Inc.<sup>101</sup>; and U.S. Patent No. 6,664,891, which Uniloc 2017 appears to allege is essential to the Bluetooth standard in an action against Samsung Electronics America, Inc.<sup>102</sup>

423. Transferring SEPs from an operating company that supplies its own products and participates in SSOs to a PAE allows the PAE to escape the protections for licensees to which licensors agree through making a FRAND commitment. When an operating company demands royalties for patents it has declared essential to industry standards, it faces bounds on the reach of its demands because it remains an operating company and an SSO participant. As an operating

<sup>100</sup> The Uniloc Defendants have taken the position in litigation against Samsung that U.S. Patent Nos. 7,167,487, and 6,868,079 are essential to mobile communications standards. *See Uniloc USA, Inc. et al. v. Samsung Electronics America, Inc. et al.*, No. 2:18-cv-00044 (E.D. Tex.) (JRG-RSP), Dkt. 65, at 4 (“It is Uniloc’s position that the ’487 patent is essential to the 3G (HSPA/HSPA+) mobile-phone standard.”); *id.* at 2-3 (“It is Uniloc’s position that the ’079 patent is essential to the LTE mobile-phone standard.”).

<sup>101</sup> *Uniloc 2017 LLC et al v. Verizon Communications Inc. et al*, 2:18-cv-00380 (E.D. Tex.) (JRG-RSP), Dkt. 1.

<sup>102</sup> *Uniloc 2017 LLC v. Samsung Electronics America, Inc. et al.*, 2:19-cv-00259 (E.D. Tex.) (JRG-RSP), Dkts. 1 and 24.

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1 company that sells its own products or services, it remains subject to assertion of patents against  
2 it by potential licensees. Thus, for example, an operating company would face constraints in  
3 demanding non-FRAND royalties or otherwise failing to adhere to a FRAND commitment because  
4 it could be subject to reciprocal demands or conduct from other SEP holders.

5 424. And, as SSO participants, operating companies have reputational interests at stake  
6 that may be injured through directly breaching their FRAND commitments. Such conduct will  
7 make SSOs and their members less likely to standardize the operating company's technology in  
8 future standards. By transferring SEPs to PAEs, operating companies avoid these constraints and  
9 enlist PAEs that are not subject to the same constraints to exploit the monopoly power associated  
10 with their claimed SEPs.

11 425. Patent transfer schemes like INVT's and the Uniloc Defendants' frustrate the  
12 purposes of the FRAND commitment in another way. By transferring portions of the SEP  
13 portfolios of operating companies to PAEs for the purpose and with the effect of driving up  
14 transaction costs and evading FRAND commitments, the scheme not only introduces inefficiencies  
15 but also makes it impossible for Apple and other device suppliers to license all of an operating  
16 company's declared SEPs in a single license. Apple had previously paid Panasonic for a license  
17 to certain of its W-CDMA SEPs through the W-CDMA patent pool administered by Sipro Lab  
18 Telecom. In addition, Apple entered a license agreement with Philips in 2012 that granted Apple  
19 a license to certain Philips patents. But Philips had already transferred one of those patents at the  
20 time of the license (without retaining a right to license Apple) and, after further transfers, it  
21 ultimately ended up with Uniloc 2017. In litigation against Apple, Uniloc 2017 claims that Apple's  
22 cellular devices infringe the transferred patent because they support 3G and LTE standards, thus  
23 relying on the purported essentiality of the transferred patent. In litigation between Apple and  
24 Philips about the scope of their license, however, Philips claims that the transferred patent is not  
25 commercially or technically essential and, therefore, does not fall within the scope of the 2012  
26 license agreement.

27 426. The transfer of SEPs from operating companies to PAEs to engage in abusive  
28

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1 licensing undermines standard-setting's procompetitive purposes of facilitating wide adoption of  
2 industry standards on economically reasonable terms, and, instead, transforms standard-setting  
3 into a mechanism for holding up and extracting exorbitant royalties from product suppliers,  
4 bringing immediate harm to product suppliers and end consumers through higher prices and  
5 reduced innovation and quality. Over the long run, abusive patent transfer schemes, like INVT  
6 and the Uniloc Defendants have employed here, chill standard-setting activities and the  
7 procompetitive benefits they bring.

8 427. There is no procompetitive justification for the anticompetitive transfer of SEPs to  
9 INVT and the Uniloc Defendants. To the extent INVT and the Uniloc Defendants assert that any  
10 procompetitive justifications exist, such purported justifications are outweighed by the  
11 anticompetitive effects in the markets alleged herein or could have been obtained in a substantially  
12 less restrictive way.

13 **V. FORTRESS AND THE OTHER DEFENDANTS HAVE HARMED**  
14 **COMPETITION IN THE RELEVANT PATENTS MARKETS**

15 428. As alleged above (e.g., paragraphs 29-77 and 124-393), Fortress, its affiliate  
16 Fortress Credit, and the other Defendants, through their anticompetitive conduct, have harmed  
17 competition at least in the Relevant Patents Markets described herein.

18 429. By creating a massive portfolio that aggregated substitutes and complements in the  
19 antitrust markets described above, Fortress decreases the importance of any particular patent held  
20 by its PAEs because, given the size of the portfolio, it becomes exceedingly difficult for any  
21 potential licensee to meaningfully analyze the patents in the portfolio in a systematic fashion.  
22 Thus, the size of the aggregated portfolio—along with Defendants' aggregation of substitute and  
23 complement patents—imposes substantial costs for suppliers of electronic devices to design or  
24 work around no matter the merits of the constituent patents. Further, as described above, Fortress's  
25 PAEs assert their patents to read broadly on the accused products in ways that are facially invalid,  
26 but that Fortress's PAEs also claim make it infeasible to design around. Moreover, the features of  
27 products accused of infringement by Fortress's PAEs may be difficult or impossible to modify  
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1 because of the extremely high switching costs involved given the investments that have already  
2 been made in product design and production. For example, a report for the Uniloc Luxembourg  
3 board of directors indicates that litigation “campaigns are launched when the relevant technology  
4 reaches a well-monetized status.” Even if Apple, Intel, and other targets of Fortress-backed  
5 assertions have had success in invalidating or proving non-infringement of certain Fortress-backed  
6 patents, Fortress and its PAEs just turn to the next patent in the portfolio to assert. Fortress and its  
7 PAEs exploit that dynamic to shield from scrutiny their patents and to extract royalties based on  
8 the size of the portfolio (including by distributing it among multiple PAEs to assert) rather than its  
9 quality. Further, the asserted SEPs held by INVT and Uniloc 2017, by definition, claim to cover  
10 essential technology that it would generally not be feasible to design around if they are actually  
11 essential.

12 430. Thus, in addition to the market power resulting from reduction of competition  
13 resulting from aggregation of substitute and complement patents, alleged above at, e.g., paragraphs  
14 124-389, the power of Fortress’s patent portfolio is based on the size of the portfolio itself, which  
15 imposes hurdles to design around regardless of the merits of the patents within it, and its  
16 distribution among aggressive PAEs. That size allows Defendants to threaten serial litigation and  
17 impose uncertainty on their victims regardless of the merits of the asserted patents, which become  
18 secondary to the sheer size of the portfolio. Accordingly, the targets of Defendants’ assertions  
19 have no choice but to buy licenses from Defendants or to face endless, meritless litigation. Before  
20 aggregation, the holders of meritless patents lacked the same incentives to assert them as do  
21 Fortress and its PAEs. But, to the extent that they had asserted them, litigation would have been  
22 a viable possibility for the targets to address those assertions. In their aggregation and serial  
23 assertion strategy, however, Defendants are not dissuaded by repeated litigation failures from  
24 asserting ever more patents.

25 431. Fortress’s aggregation of patents also decreases access to any patents that Fortress  
26 controls for which a licensee might actually want a license to use the technology in the patent.  
27 Before aggregation, those patents could have been the subject of licensing discussions focusing on  
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1 the merits of the patents and that would have promoted use of the technology. But by aggregating  
2 potentially valuable patents in a huge portfolio with meritless patents in an anticompetitive  
3 scheme, Fortress and the other Defendants obscure those patents from the market and reduce the  
4 availability of information. Thus, rather than increasing efficiency and enhancing output, the  
5 scheme has the opposite effect—the value of meritless patents is enhanced and the value of any  
6 patents in which there might have been interest in practicing is decreased, thereby reducing  
7 innovation and output.

8 432. There is no procompetitive justification for the anticompetitive aggregation of  
9 patents by Fortress and its PAEs. To the extent Defendants assert that any procompetitive  
10 justifications exist, such purported justifications are outweighed by the anticompetitive effects in  
11 the markets alleged herein or could be obtained through less restrictive means. For example, the  
12 operating companies that transferred patents to Fortress’s PAEs (after Fortress had gained control  
13 of the PAEs) would have been capable of licensing their own patents. As an example, Nokia,  
14 which transferred patents to Inventergy, reported in its 2018 annual report that “Our Patent  
15 Business continues to grow its successful patent licensing and monetization activities” and that  
16 Nokia was a party to more than 100 patent licenses.

17 **VI. THE ANTICOMPETITIVE EFFECTS AND INJURY TO PLAINTIFFS FROM**  
18 **DEFENDANTS’ SCHEME**

19 433. As set forth above, Fortress and its PAEs possess market power in the Relevant  
20 Patents Markets. Further, Fortress, INVT, and Uniloc 2017 possess monopoly power for their  
21 SEPs in the Input Technology Markets that perform each of those standardized functions.

22 434. Direct evidence demonstrates the adverse effects on competition of the  
23 anticompetitive conduct of Fortress and the other Defendants through aggregation in the Relevant  
24 Patents Markets (as described above and below). In particular, through their aggregation scheme,  
25 Fortress and the other Defendants seek and obtain far more for their patents than the costs at which  
26 they acquired those patents or the rates at which they would have been licensed before aggregation  
27 eliminated competition.  
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1           435. Fortress and its PAEs' anticompetitive scheme—including patent aggregation,  
2 ownership by an array of aggressive PAEs, and efforts to evade FRAND commitments—has led  
3 to anticompetitive effects in each of the Relevant Patents Markets, including supracompetitive  
4 royalties sought and obtained and reduced licensing output. In addition, Defendants'  
5 anticompetitive conduct has enhanced monopoly power in the Input Technology Markets. Fortress  
6 and the other Defendants' conduct has harmed and continues to harm competition in interstate  
7 commerce.

8           436. In particular, Defendants' illegal scheme has resulted in inflated licensing  
9 royalties—*i.e.*, higher prices—and imposed burdens, costs, and uncertainties for Intel, Apple, and  
10 other purchasers in the Relevant Patents Markets and each of the Input Technology Markets. The  
11 purchasers in those markets include electronic device suppliers (*e.g.*, of smartphones, tablets, and  
12 computers, such as those offered by Apple) and providers of components for such devices (*e.g.*,  
13 processors and chipsets, such as those offered by Intel) that are potential and actual licensees. In  
14 addition, as a result of the illegal conduct of Fortress and the other Defendants, U.S. and other end  
15 consumers have been harmed and face a continuing threat of increased prices and reduced  
16 innovation and quality for electronic devices.

17           437. Defendants' illegal conduct causes obvious harm to licensees such as Intel and  
18 Apple—*i.e.*, customers in the Relevant Patents Markets and/or in the Input Technology Markets—  
19 when they are compelled to pay inflated royalties. Licensing customers are also harmed, even  
20 when they do not acquiesce to an inflated royalty, by being forced to incur substantial expenses,  
21 uncertainty, and burdens in resisting the patent litigations and acute and ongoing threats that the  
22 aggregation and transfer schemes of Defendants have enabled. For example, Intel and Apple have  
23 spent millions of dollars to date on outside resources (including counsel, experts, and vendors) to  
24 defend against Fortress-backed demands and assertions. Intel and Apple have also each been  
25 harmed by the enormous amounts of time their employees have been forced to spend on these  
26 matters, including negotiating with Defendants as well as collecting information and documents  
27 and preparing for depositions, rather than doing their jobs. As an example, in litigation brought  
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1 by Uniloc USA and Uniloc Luxembourg, those Defendants have already deposed eight Apple  
2 engineers, two human resource witnesses, and one Apple licensing witness. Similarly, in Intel's  
3 litigation against VLSI in Delaware, Intel's disclosures identify twenty-five Intel employees with  
4 knowledge relevant to the litigation, including engineers and employees in the marketing and  
5 finance departments. An employee identified in such disclosures is typically deposed,  
6 necessitating at least two full days dedicated to the litigation between preparation and sitting for  
7 the deposition, in addition to other time dedicated to identifying relevant documents or providing  
8 information to counsel on the facts of the case. Defendants have employed the strategies set forth  
9 herein to impose these costs on licensees and to use their leverage to extract unreasonable and  
10 unjustified royalties. Intel and Apple continue to experience the unlawful effects of Defendants'  
11 unlawful conduct so long as they are subject to litigation by Fortress-backed patents. Intel, Apple,  
12 and other purchasers in the Relevant Patents Markets have also been harmed by the ongoing threat  
13 that Defendants will seek exorbitant royalties based on their aggregation of substitute and  
14 complement patents in the Relevant Patents Markets and the uncertainty caused by such threat.

15 438. For declared SEPs specifically, Fortress, INVT, and the Uniloc Defendants'  
16 FRAND evasion has led to precisely the sort of anticompetitive effects that ETSI's IPR Policy was  
17 designed to avoid, leading to inflated prices in Input Technology Markets associated with their  
18 declared SEPs, as well as higher prices and reduced innovation and quality for downstream  
19 purchasers. The transfer of those SEPs to PAEs in exchange for a share of licensing revenue has  
20 imposed exorbitant non-FRAND royalties (or heavy costs in trying to avoid such royalties) on  
21 Apple and other suppliers of products that support cellular standards. This has led to inflated prices  
22 in Input Technology Markets associated with INVT and the Uniloc Defendants' declared SEPs, as  
23 well as higher prices and reduced innovation and quality for consumers of cellular products.  
24 Moreover, the illicit SEP transfer scheme has chilled, and, if not enjoined, will continue to chill  
25 procompetitive standard-setting, to the detriment of industry and American and other consumers  
26 alike.



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**FIRST COUNT**

**Agreements to Restrain Competition in Patent Licensing**

**(Section 1 of the Sherman Act)**

**(Claim Against Fortress, Fortress Credit, Uniloc USA, Uniloc Luxembourg, Inventergy, and IXI IP)**

439. Intel and Apple repeat and reallege the allegations of the preceding and subsequent paragraphs as if fully set forth herein.

440. As alleged above, particularly at paragraphs 51-77, Fortress and Fortress Credit reached agreements with various parties, including Uniloc USA, Uniloc Luxembourg, Inventergy, and IXI IP (collectively the “Agreeing Parties”), to aggregate patents under Fortress’s control and to assert patents to increase the total royalties obtained from licensing the Fortress-backed patents. Fortress and each of the Agreeing Parties intended that through their agreements they would extract royalties from their targets—like Intel and Apple—beyond the royalties that could have been obtained but for aggregation by Fortress.

441. The agreements between Fortress and the Agreeing Parties to aggregate patents substantially raised or threaten to raise prices and have resulted or threaten to result in other anticompetitive effects, including in the Relevant Patents Markets (as described at paragraphs 124-389), and for downstream products sold to consumers. The agreements have substantially affected interstate commerce.

442. The agreements to aggregate and assert patents generated no efficiencies, and in fact were designed to create inefficiencies in the licensing that Fortress could exploit to harm Intel, Apple, and other potential licensees, as well as finished product consumers. Any conceivable efficiencies the agreements may have created were substantially outweighed by their anticompetitive effects or could have been obtained through substantially less restrictive means.

443. As a direct, proximate, and foreseeable result of Fortress and the Agreeing Parties’ unlawful agreements, Intel and Apple have suffered or will suffer harm to their businesses and property, and, absent an injunction, Intel and Apple will continue to suffer from these effects. Intel

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1 and Apple's past and continuing harm includes litigation costs, the risk of supracompetitive  
2 licensing rates, business uncertainty, and business resources lost in dealing with the consequences  
3 of the Agreeing Parties' unlawful agreements.

**SECOND COUNT****Unlawful Asset Acquisitions****(Section 7 of the Clayton Act)****(Claim Against Fortress, Fortress Credit, Uniloc 2017, VLSI, INVT, IXI IP,  
and Seven Networks)**

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444. Intel and Apple repeat and reallege the allegations of the preceding and subsequent paragraphs as if fully set forth herein.

445. Fortress, Fortress Credit, Uniloc 2017, VLSI, INVT, IXI IP, and Seven Networks (the "Acquiring Parties") have acquired numerous patents (or interests in patents), which are assets under Section 7 of the Clayton Act. Those anticompetitive acquisitions include at least those described in Section I above. The effects of the acquisitions have been to lessen competition substantially, and to tend to create market power, including in the Relevant Patents Markets. Among other harms, the transfers have significantly enhanced the Acquiring Parties' ability and incentives to harm competition, including by evading constraints on assertion and creating incentives to assert patents aggressively and thus increasing the cost and likelihood of litigation.

446. As a direct, proximate, and foreseeable result of the Acquiring Parties' unfair and wrongful conduct, as alleged above, there is a significant threat of inflated royalties to consumers of licenses to Fortress-backed patents.

447. As a direct, proximate, and foreseeable result of the Acquiring Parties' unfair and wrongful conduct, as alleged above, there is a significant threat of harm to consumers, including through the inevitable passing on to consumers of the inflated royalties demanded for Fortress-backed patents. The anticompetitive acquisitions have thus harmed consumers for electronics products.

448. As a direct, proximate, and foreseeable result of the unlawful patent acquisitions,

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Intel and Apple have suffered or will suffer harm to their businesses and property, and, absent an injunction and rescission of these transactions, Intel and Apple will continue to suffer from these effects. Intel and Apple's past and continuing harm include the risk of supracompetitive licensing rates, business uncertainty, litigation costs, and business resources lost in dealing with the consequences of the Acquiring Parties' unlawfully-acquired patents.

**THIRD COUNT****Unfair Competition****(Cal. Bus. & Prof. Code § 17200)****(Claim Against All Defendants)**

449. Intel and Apple repeat and reallege the allegations of the preceding and subsequent paragraphs as if fully set forth herein.

450. Defendants have engaged in unfair competition in violation of Cal. Bus. Prof. Code § 17200, et seq. As set forth above, Defendants have engaged in illegal conduct by violating the Sherman and Clayton Acts. That conduct is also unfair in that it violates the spirit and policy of the antitrust laws.

451. As a direct result of Defendants' wrongful conduct, competition has been injured, and, absent an injunction and rescission of these transactions, will continue to be injured, including in the Relevant Patents Markets as alleged above. Moreover, this conduct threatens injury to downstream competition for price, innovation, and quality in sales of cellular devices, thereby injuring consumers in California and elsewhere. These threatened injuries include the passing on to consumers of improperly inflated royalties, and decreases in innovation and quality competition.

452. As a direct result of Defendants' illegal conduct, Intel and Apple have suffered economic harm in the form of litigation costs and diversion of resources away from innovation to respond to these entities' serial nuisance suits.

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**FOURTH COUNT – BY APPLE ONLY**

**Unfair Competition**

**(Cal. Bus. & Prof. Code § 17200)**

**(Claim Against Fortress, Fortress Credit, Uniloc USA,  
Uniloc Luxembourg, Uniloc 2017, INVT, Inventergy Only)**

453. Apple repeats and realleges the allegations of the preceding and subsequent paragraphs as if fully set forth herein.

454. Fortress, Fortress Credit, Uniloc USA, Uniloc Luxembourg, Uniloc 2017, INVT, and Inventergy have engaged in unfair competition in violation of Cal. Bus. Prof. Code § 17200, et seq. As described below, their conduct violates Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. That conduct is also unfair in that it violates the spirit and policy of the antitrust laws.

455. Fortress, Fortress Credit, Uniloc USA, Uniloc Luxembourg, Uniloc 2017, INVT, and Inventergy's unfair business practices include their efforts to evade FRAND commitments through the transfer of SEPs in the Input Technology Markets to INVT and Uniloc 2017, as described in paragraphs 410-422. The acquiring parties would then demand non-FRAND royalties in violation of those FRAND commitments.<sup>103</sup>

456. The United States Federal Trade Commission ("FTC") enforces Section 5 of the Federal Trade Commission Act, which is similar to Cal. Bus. & Prof. Code § 17200. Section 5 of the FTC Act is used as a model in interpreting Cal. Bus. & Prof. Code § 17200.

457. The FTC has brought an action under Section 5 where, like here, an acquiring firm refused to abide by licensing commitments that its predecessor made in connection with industry standard-setting activities.<sup>104</sup>

458. As a direct result of Fortress, Fortress Credit, Uniloc USA, Uniloc Luxembourg,

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<sup>103</sup> Apple brings this Count only as to conduct relating to patents that INVT and Uniloc 2017 have not yet asserted against Apple.

<sup>104</sup> See Decision and Order, *In the Matter of Negotiated Data Solutions LLC*, File No. 051-0094 (Jan. 23, 2008), available at <https://www.ftc.gov/sites/default/files/documents/cases/2008/01/080122do.pdf>.

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Uniloc 2017, INVT, and Inventergy's wrongful conduct, competition has been injured and, absent an injunction, will continue to be injured, in the Input Technology Markets as alleged above. Moreover, this conduct threatens injury to downstream competition for price, innovation, and quality in sales of cellular devices, thereby injuring consumers in California and elsewhere. These threatened injuries include the passing on to consumers of improperly inflated royalties, and decreases in innovation and quality competition for cellular devices that comply with relevant standards by raising costs for innovators to bring products to market via exorbitant, non-FRAND licensing terms. As a direct result of Fortress, Fortress Credit, Uniloc USA, Uniloc Luxembourg, Uniloc 2017, INVT, and Inventergy's illegal conduct, Apple has suffered economic harm in the form of litigation costs and diversion of resources away from innovation to respond to these entities' serial nuisance suits.

**PRAYER FOR RELIEF**

Intel and Apple respectfully request the following relief:

- a) That Defendants' unlawful conduct be declared a violation of Section 1 of the Sherman Act, 15 U.S.C. § 1; Section 7 of the Clayton Act, 15 U.S.C. § 18; and Cal. Bus. Prov. Code § 17200, et seq.;
- b) That Intel and Apple recover damages against Defendants in an amount to be determined and multiplied to the extent provided by law, including under Section 4 of the Clayton Act;
- c) That all contracts or agreements Defendants entered into in violation of the Sherman Act, Clayton Act, or Cal. Bus. Prov. Code § 17200, et seq. be declared void and the patents covered by those transfer agreements be transferred back to the transferors;
- d) That all patents transferred to Defendants in violation of the Sherman Act, Clayton Act, or Cal. Bus. Prov. Code § 17200, et seq. be declared unenforceable;
- e) Award to Intel and Apple their costs and expenses associated with this case, together with interest; and
- f) Grant such other and further relief as the Court may deem just and proper under the circumstances.

**JURY DEMAND**

Intel and Apple demand a jury trial on all issues and claims so triable.

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DATED: August 4, 2020

Respectfully submitted,

By: /s/ Mark D. Selwyn

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**CERTIFICATE OF SERVICE**

On this 4th day of August 2020, I hereby certify that I caused the foregoing document entitled Amended Complaint to be filed via the court's CM/ECF system, which shall send notice to the counsel of record for the parties.

DATED: August 4, 2020

Respectfully submitted,

By: /s/ Mark D. Selwyn

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